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(21) International Application Number: PCT/US99/24205 (22) International Filing Date: 15 October 1999 (15.10.99) (30) Priority Data: 60/104,435 15 October 1998 (15.10.98) US (63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application US 60/104,435 (CIP) Filed on 15 October 1998 (15.10.98) (71) Applicant (for all designated States except US): GENETICS INSTITUTE, INC. [US/US]; 87 CambridgePark Drive, Cambridge, MA 02140 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): JACOBS, Kenneth [US/US]; 151 Beaumont Avenue, Newton, MA 02160 (US). MCCOY, John, M. [GB/US]; 56 Howard Street, Reading, MA 01867 (US). LaVALLIE, Edward, R. [US/US]; 113 Ann Lee Road, Harvard, MA 01451 (US). COLLINS-RACIE, Lisa, A. [US/US]; 124 School Street, Acton, MA 01720 (US). EVANS, Cheryl [GB/US]; 18801 Bent Willow Circle, Germantown, MD 20874 (US).	(74) Agent: SPRUNGER, Suzanne, A.; American Home Products Corporation, Patent & Trademark Dept. - 2B, One Campus Drive, Parsippany, NJ 07054 (US). (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(54) Title: SECRETED EXPRESSED SEQUENCE TAGS (sESTs) (57) Abstract Secreted expressed sequence tags (sESTs) isolated from a variety of human tissue sources are provided.		

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SECRETED EXPRESSED SEQUENCE TAGS (sESTs)

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FIELD OF THE INVENTION

The present invention provides novel polynucleotides which are expressed sequence tags (ESTs) for secreted proteins.

BACKGROUND OF THE INVENTION

Gargantuan efforts have been employed by various investigational projects to randomly sequence portions of naturally-occurring cDNAs. The rationale behind this approach to identification and sequencing genes is founded in two basic principles: (1) that transcribed cDNAs represent the product of the most important genes, namely those that are actually expressed *in vivo*, and (2) that efforts to sequence genes and other portions of the genome of target organisms which are not actually expressed wastes substantial effort on areas not likely to yield genetic information of therapeutic importance. Thus, the high-throughput sequencing efforts focus on only those portions of the genome which are expressed. The randomly produced cDNA sequences represent "expressed sequence tags" or "ESTs", which identify and can be used as probes for the longer, full-length cDNA or genomic sequence from which they were transcribed.

Although this "shortcut" approach to genomic sequencing presents savings of effort compared to sequencing of the complete genome, it still produced a vast array of ESTs which may not be directly useful as protein therapeutics. To date, the majority of protein-related drug discovery has focused on the use of secreted proteins to produce a desired therapeutic effect. Since the EST approach theoretically identifies all expressed proteins, it produces an EST library which contains a mixture of secreted proteins (such as hormones, cytokines and receptors) and non-secreted proteins (such as, for example, metabolic enzymes and cellular structural proteins), without identifying which ESTs correspond to proteins falling into either category. As a result, these methods are not optimally tailored to the needs of investigators searching for secreted proteins because they must separate the secreted "wheat" from the non-secreted "chaff", wasting effort and resources in the process.

Co-assigned U.S. Patent No. 5,536,637, which is incorporated herein by reference, provides methods for focusing genomic sequencing efforts on sequences encoding the secreted proteins which are of most interest for identification of protein therapeutics. The '637 patent discloses a "signal sequence trap" which selectively identifies ESTs for secreted proteins, namely "secreted expressed sequence tags" or "sESTs". It is to these sESTs that the present invention is directed.

SUMMARY OF THE INVENTION

The present invention provides for sESTs isolated from a variety of human RNA/cDNA sources.

In preferred embodiments, the present invention provides an isolated
5 polynucleotide comprising a nucleotide sequence selected from the group consisting of:

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or a complement of said sequence.

In other embodiments, the present invention provides an isolated
polynucleotide consisting of a nucleotide sequence selected from the group consisting
10 of:

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or a complement of said sequence.

In further embodiments, the present invention provides an isolated polynucleotide consisting essentially of a nucleotide sequence selected from the group consisting of:

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15 or a complement of said sequence.

In yet other embodiments, the present invention provides an isolated polynucleotide comprising a nucleotide sequence which hybridizes to a sequence selected from the group consisting of:

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or to a complement of said sequence.

20 The invention also provides for proteins encoded by the above-described
polynucleotides. In certain preferred embodiments, the polynucleotide is operably
linked to an expression control sequence. The invention also provides a host cell,
including bacterial, yeast, insect and mammalian cells, transformed with such
polynucleotide compositions. Also provided by the present invention are organisms
25 that have enhanced, reduced, or modified expression of the gene(s) corresponding
to the polynucleotide sequences disclosed herein.

Processes are also provided for producing a protein, which comprise:

- (a) growing a culture of the host cell transformed with such
polynucleotide compositions in a suitable culture medium; and
- 30 (b) purifying the protein from the culture.

The protein produced according to such methods is also provided by the present
invention.

Protein compositions of the present invention may further comprise a pharmaceutically acceptable carrier. Compositions comprising an antibody which specifically reacts with such protein are also provided by the present invention.

Methods are also provided for preventing, treating or ameliorating a medical condition which comprises administering to a mammalian subject a therapeutically effective amount of a composition comprising a protein of the present invention, and/or a polynucleotide of the present invention, and a pharmaceutically acceptable carrier.

10

DETAILED DESCRIPTION

The nucleotide sequences of the sESTs of the present invention are reported in the Sequence Listing below. Table 2 lists the "Clone ID Nos." assigned by applicants to each SEQ ID NO: in the Sequence Listing.

15 Table 2

Each pair of entries in this table consists of the SEQ ID NO (e.g., 1, 2, etc.) followed by the Clone ID No. for such sequence (e.g., AA239, AA249, etc.).

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20	2	PP9	18	PR113	34	PT141	50	PT214
	3	PP95	19	PR24	35	PT144	51	PT215
	4	PP96	20	PR47	36	PT148	52	PT217
	5	PQ104	21	PR90	37	PT149	53	PT219
	6	PQ109	22	PS46	38	PT150	54	PT228
25	7	PQ114	23	PS48	39	PT159	55	PT230
	8	PQ12	24	PS51	40	PT16	56	PT233
	9	PQ134	25	PS59	41	PT171	57	PT249
	10	PQ15	26	PS66	42	PT179	58	PT259
	11	PQ28	27	PT109	43	PT184	59	PT26
30	12	PQ29	28	PT11	44	PT189	60	PT268
	13	PQ37	29	PT111	45	PT19	61	PT274
	14	PQ59	30	PT115	46	PT195	62	PT282
	15	PQ74	31	PT118	47	PT2	63	PT284
	16	PQ9	32	PT127	48	PT204	64	PT285

	65	PT293	99	PT398	133	PU164	167	PV110
	66	PT295	100	PT403	134	PU165	168	PV119
	67	PT296	101	PT409	135	PU169	169	PV126
	68	PT298	102	PT434	136	PU199	170	PV138
5	69	PT301	103	PT435	137	PU2	171	PV143
	70	PT307	104	PT437	138	PU214	172	PV149
	71	PT31	105	PT442	139	PU220	173	PV16
	72	PT310	106	PT444	140	PU226	174	PV163
	73	PT315	107	PT446	141	PU234	175	PV174
10	74	PT318	108	PT448	142	PU235	176	PV177
	75	PT324	109	PT449	143	PU237	177	PV183
	76	PT326	110	PT450	144	PU258	178	PV192
	77	PT328	111	PT451	145	PU26	179	PV193
	78	PT330	112	PT453	146	PU261	180	PV198
15	79	PT332	113	PT455	147	PU264	181	PV203
	80	PT334	114	PT457	148	PU274	182	PV205
	81	PT343	115	PT464	149	PU276	183	PV210
	82	PT346	116	PT57	150	PU280	184	PV213
	83	PT347	117	PT65	151	PU282	185	PV214
20	84	PT348	118	PT67	152	PU289	186	PV23
	85	PT35	119	PT71	153	PU291	187	PV231
	86	PT354	120	PT82	154	PU307	188	PV235
	87	PT355	121	PT97	155	PU312	189	PV269
	88	PT357	122	PU100	156	PU314	190	PV282
25	89	PT358	123	PU101	157	PU43	191	PV286
	90	PT364	124	PU107	158	PU56	192	PV291
	91	PT365	125	PU113	159	PU61	193	PV294
	92	PT367	126	PU116	160	PU71	194	PV296
	93	PT375	127	PU117	161	PU77	195	PV297
30	94	PT38	128	PU123	162	PU85	196	PV30
	95	PT381	129	PU124	163	PU86	197	PV306
	96	PT383	130	PU134	164	PU89	198	PV313
	97	PT385	131	PU139	165	PU96	199	PV316
	98	PT387	132	PU142	166	PV107	200	PV323

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	202	PV330	236	PV679	270	PW345	304	PW503
	203	PV339	237	PV70	271	PW356	305	PW504
	204	PV343	238	PV700	272	PW359	306	PW508
5	205	PV347	239	PV715	273	PW369	307	PW524
	206	PV35	240	PV72	274	PW370	308	PW528
	207	PV371	241	PV721	275	PW378	309	PW540
	208	PV383	242	PV725	276	PW381	310	PW567
	209	PV390	243	PW102	277	PW394	311	PW587
10	210	PV398	244	PW11	278	PW398	312	PW588
	211	PV439	245	PW114	279	PW4	313	PW60
	212	PV45	246	PW120	280	PW403	314	PW66
	213	PV472	247	PW123	281	PW410	315	PW73
	214	PV475	248	PW159	282	PW417	316	PW75
15	215	PV510	249	PW170	283	PW418	317	PW95
	216	PV511	250	PW186	284	PW422	318	PX100
	217	PV512	251	PW192	285	PW429	319	PX103
	218	PV53	252	PW195	286	PW430	320	PX115
	219	PV534	253	PW214	287	PW435	321	PX125
20	220	PV535	254	PW245	288	PW437	322	PX129
	221	PV548	255	PW26	289	PW445	323	PX135
	222	PV549	256	PW267	290	PW447	324	PX146
	223	PV560	257	PW269	291	PW448	325	PX151
	224	PV58	258	PW27	292	PW452	326	PX155
25	225	PV581	259	PW271	293	PW453	327	PX166
	226	PV585	260	PW288	294	PW459	328	PX169
	227	PV59	261	PW3	295	PW460	329	PX202
	228	PV6	262	PW303	296	PW463	330	PX207
	229	PV623	263	PW311	297	PW471	331	PX223
30	230	PV635	264	PW320	298	PW475	332	PX225
	231	PV64	265	PW328	299	PW482	333	PX51
	232	PV640	266	PW335	300	PW491	334	PX54
	233	PV65	267	PW337	301	PW496	335	PX60
	234	PV662	268	PW341	302	PW498	336	PX73

	337	PX75	371	PZ362	405	QB205	439	QB311
	338	PX94	372	PZ388	406	QB208	440	QB32
	339	PY10	373	Q13	407	QB211	441	QB326
	340	PY133	374	Q153	408	QB212	442	QB344
5	341	PY156	375	Q172	409	QB214	443	QB360
	342	PY16	376	Q303	410	QB216	444	QB370
	343	PY184	377	Q513	411	QB217	445	QB375
	344	PY187	378	Q66	412	QB22	446	QB379
	345	PY195	379	Q691	413	QB221	447	QB389
10	346	PY202	380	Q719	414	QB232	448	QB39
	347	PY215	381	Q725	415	QB235	449	QB393
	348	PY220	382	QA133	416	QB24	450	QB395
	349	PY239	383	QA136	417	QB241	451	QB397
	350	PY251	384	QB10	418	QB242	452	QB401
15	351	PY254	385	QB120	419	QB245	453	QB405
	352	PY256	386	QB122	420	QB246	454	QB44
	353	PY260	387	QB131	421	QB25	455	QB56
	354	PY27	388	QB132	422	QB251	456	QC109
	355	PY34	389	QB135	423	QB252	457	QC113
20	356	PY38	390	QB136	424	QB254	458	QC12
	357	PY39	391	QB146	425	QB257	459	QC126
	358	PY40	392	QB149	426	QB259	460	QC133
	359	PY46	393	QB152	427	QB26	461	QC146
	360	PY54	394	QB153	428	QB264	462	QC147
25	361	PY7	395	QB164	429	QB271	463	QC152
	362	PY9	396	QB165	430	QB280	464	QC156
	363	PY97	397	QB184	431	QB282	465	QC16
	364	PZ181	398	QB188	432	QB286	466	QC183
	365	PZ243	399	QB196	433	QB287	467	QC190
30	366	PZ300	400	QB199	434	QB289	468	QC199
	367	PZ311	401	QB2	435	QB299	469	QC215
	368	PZ313	402	QB20	436	QB300	470	QC221
	369	PZ331	403	QB200	437	QB301	471	QC226
	370	PZ355	404	QB203	438	QB307	472	QC228

	473	QC229	507	QC49	541	QD201	575	QF114
	474	QC243	508	QC496	542	QD210	576	QF116
	475	QC262	509	QC502	543	QD229	577	QF118
	476	QC265	510	QC506	544	QD242	578	QF121
5	477	QC280	511	QC51	545	QD251	579	QF122
	478	QC284	512	QC525	546	QD253	580	QF132
	479	QC297	513	QC534	547	QD275	581	QF139
	480	QC31	514	QC55	548	QD279	582	QF142
	481	QC333	515	QC556	549	QD285	583	QF147
10	482	QC337	516	QC575	550	QD286	584	QF151
	483	QC339	517	QC578	551	QD302	585	QF153
	484	QC365	518	QC584	552	QD310	586	QF16
	485	QC368	519	QC587	553	QD327	587	QF160
	486	QC380	520	QC59	554	QD328	588	QF161
15	487	QC384	521	QC61	555	QD351	589	QF167
	488	QC386	522	QC611	556	QD388	590	QF17
	489	QC416	523	QC613	557	QD402	591	QF170
	490	QC42	524	QC617	558	QD407	592	QF175
	491	QC432	525	QC63	559	QD421	593	QF199
20	492	QC434	526	QC632	560	QD454	594	QF2
	493	QC436	527	QC638	561	QD465	595	QF220
	494	QC438	528	QC646	562	QD491	596	QF224
	495	QC439	529	QC664	563	QD518	597	QF23
	496	QC443	530	QC668	564	QD89	598	QF233
25	497	QC452	531	QC671	565	QD97	599	QF241
	498	QC458	532	QC687	566	QE193	600	QF248
	499	QC462	533	QC690	567	QE272	601	QF259
	500	QC466	534	QC698	568	QE313	602	QF266
	501	QC467	535	QC708	569	QE357	603	QF276
30	502	QC478	536	QC84	570	QE424	604	QF278
	503	QC483	537	QD103	571	QF101	605	QF282
	504	QC485	538	QD111	572	QF103	606	QF286
	505	QC487	539	QD151	573	QF109	607	QF298
	506	QC488	540	QD159	574	QF110	608	QF303

	609	QF308	643	QF476	677	QF707	711	QG473
	610	QF317	644	QF497	678	QF714	712	QG492
	611	QF319	645	QF507	679	QF75	713	QG531
	612	QF320	646	QF511	680	QF76	714	QG537
5	613	QF327	647	QF513	681	QF93	715	QG542
	614	QF328	648	QF519	682	QF99	716	QG548
	615	QF331	649	QF526	683	QG107	717	QG570
	616	QF338	650	QF53	684	QG127	718	QG571
	617	QF35	651	QF530	685	QG137	719	QG576
10	618	QF359	652	QF539	686	QG170	720	QG577
	619	QF362	653	QF541	687	QG171	721	QG586
	620	QF363	654	QF542	688	QG175	722	QG591
	621	QF366	655	QF556	689	QG185	723	QG593
	622	QF373	656	QF559	690	QG325	724	QG596
15	623	QF375	657	QF56	691	QG342	725	QG619
	624	QF377	658	QF575	692	QG357	726	QG643
	625	QF383	659	QF582	693	QG361	727	QH160
	626	QF385	660	QF6	694	QG373	728	QH184
	627	QF388	661	QF619	695	QG376	729	QH209
20	628	QF393	662	QF620	696	QG378	730	QH211
	629	QF400	663	QF625	697	QG383	731	QH250
	630	QF401	664	QF631	698	QG389	732	QH30
	631	QF404	665	QF636	699	QG398	733	QH324
	632	QF43	666	QF644	700	QG428	734	QH417
25	633	QF442	667	QF65	701	QG433	735	QH48
	634	QF453	668	QF657	702	QG437	736	QH64
	635	QF454	669	QF662	703	QG443	737	QL104
	636	QF455	670	QF663	704	QG449	738	QL109
	637	QF459	671	QF675	705	QG459	739	QL118
30	638	QF46	672	QF679	706	QG465	740	QL125
	639	QF463	673	QF691	707	QG467	741	QL128
	640	QF464	674	QF696	708	QG469	742	QL129
	641	QF467	675	QF703	709	QG470	743	QL130
	642	QF475	676	QF706	710	QG472	744	QL131

	745	QL14	779	QO16	813	QS28	847	QU435
	746	QL16	780	QO164	814	QS39	848	QU449
	747	QL18	781	QO167	815	QS47	849	QU456
	748	QL31	782	QO169	816	QS82	850	QU459
5	749	QL33	783	QO17	817	QS85	851	QU475
	750	QL37	784	QO177	818	QT4	852	QU477
	751	QL4	785	QO203	819	QT6	853	QU483
	752	QL43	786	QO204	820	QU108	854	QU487
	753	QL54	787	QO206	821	QU156	855	QU499
10	754	QL80	788	QO37	822	QU159	856	QU512
	755	QL84	789	QO49	823	QU192	857	QU529
	756	QL98	790	QO75	824	QU210	858	QU532
	757	QM10	791	QO86	825	QU211	859	QU541
	758	QM13	792	QO91	826	QU218	860	QU542
15	759	QM20	793	QR10	827	QU225	861	QU549
	760	QM22	794	QR29	828	QU228	862	QU552
	761	QM23	795	QR40	829	QU234	863	QU567
	762	QM24	796	QR82	830	QU235	864	QU71
	763	QM34	797	QR91	831	QU243	865	QU97
20	764	QM39	798	QS120	832	QU260	866	QU98
	765	QM42	799	QS124	833	QU262	867	QV229
	766	QM54	800	QS13	834	QU298	868	QV235
	767	QM59	801	QS135	835	QU300	869	QV245
	768	QM77	802	QS14	836	QU303	870	QV257
25	769	QM89	803	QS140	837	QU307	871	QV289
	770	QN32	804	QS15	838	QU330	872	QV299
	771	QN7	805	QS153	839	QU332	873	QV306
	772	QO101	806	QS157	840	QU335	874	QV320
	773	QO111	807	QS16	841	QU348	875	QV326
30	774	QO115	808	QS160	842	QU355	876	QV327
	775	QO120	809	QS162	843	QU386	877	QV331
	776	QO140	810	QS164	844	QU398	878	QV349
	777	QO143	811	QS171	845	QU418	879	QV363
	778	QO157	812	QS20	846	QU420	880	QV364

	881	QV378	915	QY1261	949	QY1496	983	QY26
	882	QV391	916	QY1263	950	QY1497	984	QY261
	883	QV521	917	QY1268	951	QY15	985	QY266
	884	QV530	918	QY1271	952	QY1515	986	QY269
5	885	QV531	919	QY1285	953	QY1517	987	QY271
	886	QV538	920	QY1288	954	QY1555	988	QY277
	887	QV549	921	QY129	955	QY1560	989	QY295
	888	QX228	922	QY1299	956	QY1561	990	QY3
	889	QX233	923	QY1306	957	QY1570	991	QY318
10	890	QX264	924	QY1309	958	QY1586	992	QY331
	891	QX312	925	QY132	959	QY1593	993	QY338
	892	QX317	926	QY1327	960	QY1597	994	QY349
	893	QX338	927	QY1339	961	QY1608	995	QY356
	894	QY100	928	QY1342	962	QY1609	996	QY359
15	895	QY1013	929	QY1344	963	QY1642	997	QY361
	896	QY1042	930	QY1345	964	QY1645	998	QY385
	897	QY1065	931	QY1346	965	QY1649	999	QY401
	898	QY1068	932	QY1349	966	QY1660	1000	QY426
	899	QY1073	933	QY1352	967	QY1662	1001	QY441
20	900	QY1075	934	QY1358	968	QY1681	1002	QY442
	901	QY11	935	QY1361	969	QY1720	1003	QY444
	902	QY1102	936	QY1369	970	QY1748	1004	QY448
	903	QY1103	937	QY1376	971	QY1750	1005	QY45
	904	QY1108	938	QY1379	972	QY1753	1006	QY450
25	905	QY1141	939	QY138	973	QY1754	1007	QY458
	906	QY1175	940	QY1383	974	QY1755	1008	QY471
	907	QY1180	941	QY1388	975	QY1756	1009	QY478
	908	QY12	942	QY1394	976	QY1775	1010	QY502
	909	QY1209	943	QY1418	977	QY1781	1011	QY51
30	910	QY1215	944	QY1437	978	QY189	1012	QY536
	911	QY1221	945	QY1445	979	QY214	1013	QY550
	912	QY1224	946	QY1462	980	QY220	1014	QY562
	913	QY1256	947	QY1488	981	QY247	1015	QY566
	914	QY1259	948	QY1495	982	QY257	1016	QY571

	1017	QY593	1051	QZ452	1085	RB448	1119	RB806
	1018	QY623	1052	QZ466	1086	RB485	1120	RB81
	1019	QY644	1053	QZ484	1087	RB497	1121	RB810
	1020	QY704	1054	QZ492	1088	RB513	1122	RB819
5	1021	QY720	1055	QZ498	1089	RB535	1123	RB822
	1022	QY722	1056	RA1018	1090	RB540	1124	RB98
	1023	QY740	1057	RA1121	1091	RB541	1125	RC11
	1024	QY742	1058	RA138	1092	RB544	1126	RC14
	1025	QY746	1059	RA281	1093	RB580	1127	RC21
10	1026	QY757	1060	RA475	1094	RB619	1128	RC29
	1027	QY769	1061	RA562	1095	RB623	1129	RC3
	1028	QY798	1062	RA574	1096	RB627	1130	RC37
	1029	QY801	1063	RA618	1097	RB630	1131	RC57
	1030	QY812	1064	RA726	1098	RB649	1132	RC58
15	1031	QY823	1065	RA885	1099	RB66	1133	RC60
	1032	QY824	1066	RA892	1100	RB666	1134	RC65
	1033	QY833	1067	RA900	1101	RB668	1135	RC7
	1034	QY835	1068	RA905	1102	RB673	1136	RC76
	1035	QY856	1069	RB126	1103	RB674	1137	RD1025
20	1036	QY859	1070	RB160	1104	RB688	1138	RD1027
	1037	QY863	1071	RB164	1105	RB693	1139	RD103
	1038	QY87	1072	RB198	1106	RB714	1140	RD1030
	1039	QY880	1073	RB202	1107	RB727	1141	RD1039
	1040	QY884	1074	RB206	1108	RB738	1142	RD1046
25	1041	QY89	1075	RB218	1109	RB749	1143	RD1049
	1042	QY99	1076	RB231	1110	RB758	1144	RD1054
	1043	QZ118	1077	RB312	1111	RB771	1145	RD1058
	1044	QZ127	1078	RB313	1112	RB773	1146	RD1059
	1045	QZ159	1079	RB342	1113	RB778	1147	RD1068
30	1046	QZ284	1080	RB382	1114	RB788	1148	RD1073
	1047	QZ290	1081	RB40	1115	RB789	1149	RD1094
	1048	QZ311	1082	RB409	1116	RB791	1150	RD1101
	1049	QZ382	1083	RB419	1117	RB792	1151	RD1102
	1050	QZ422	1084	RB422	1118	RB80	1152	RD1109

	1153	RD1111	1187	RD542	1221	RD925	1255	RG184
	1154	RD1124	1188	RD567	1222	RD942	1256	RG199
	1155	RD1131	1189	RD569	1223	RD946	1257	RG200
	1156	RD1141	1190	RD59	1224	RD954	1258	RG211
5	1157	RD1143	1191	RD592	1225	RD959	1259	RG219
	1158	RD1147	1192	RD610	1226	RD960	1260	RG241
	1159	RD1156	1193	RD616	1227	RD962	1261	RG246
	1160	RD1158	1194	RD62	1228	RD966	1262	RG248
	1161	RD1168	1195	RD649	1229	RD969	1263	RG272
10	1162	RD1179	1196	RD652	1230	RD989	1264	RG278
	1163	RD1195	1197	RD67	1231	RD996	1265	RG287
	1164	RD187	1198	RD680	1232	RD997	1266	RG296
	1165	RD194	1199	RD76	1233	RE127	1267	RG299
	1166	RD207	1200	RD775	1234	RE133	1268	RG315
15	1167	RD210	1201	RD778	1235	RE15	1269	RG325
	1168	RD214	1202	RD786	1236	RE219	1270	RG33
	1169	RD229	1203	RD788	1237	RE257	1271	RG333
	1170	RD232	1204	RD792	1238	RE326	1272	RG342
	1171	RD252	1205	RD798	1239	RE345	1273	RG348
20	1172	RD263	1206	RD8	1240	RE365	1274	RG352
	1173	RD309	1207	RD807	1241	RE72	1275	RG353
	1174	RD310	1208	RD810	1242	RF282	1276	RG367
	1175	RD312	1209	RD811	1243	RF439	1277	RG390
	1176	RD392	1210	RD825	1244	RF476	1278	RG407
25	1177	RD432	1211	RD826	1245	RF499	1279	RG409
	1178	RD435	1212	RD852	1246	RF84	1280	RG419
	1179	RD440	1213	RD853	1247	RG105	1281	RG445
	1180	RD456	1214	RD863	1248	RG113	1282	RG447
	1181	RD47	1215	RD870	1249	RG133	1283	RG452
30	1182	RD5	1216	RD876	1250	RG137	1284	RG453
	1183	RD517	1217	RD902	1251	RG145	1285	RG473
	1184	RD52	1218	RD913	1252	RG158	1286	RG48
	1185	RD530	1219	RD917	1253	RG177	1287	RG481
	1186	RD539	1220	RD918	1254	RG178	1288	RG482

	1289	RG494	1323	RI130	1357	RJ497	1391	RJ897
	1290	RG522	1324	RI21	1358	RJ499	1392	RJ898
	1291	RG528	1325	RI231	1359	RJ504	1393	RJ900
	1292	RG531	1326	RI91	1360	RJ507	1394	RJ903
5	1293	RG533	1327	RJ118	1361	RJ520	1395	RJ925
	1294	RG539	1328	RJ137	1362	RJ525	1396	RJ95
	1295	RG555	1329	RJ139	1363	RJ533	1397	RJ952
	1296	RG563	1330	RJ150	1364	RJ545	1398	RJ965
	1297	RG571	1331	RJ170	1365	RJ552	1399	RK100
10	1298	RG575	1332	RJ187	1366	RJ601	1400	RK115
	1299	RG583	1333	RJ214	1367	RJ652	1401	RK137
	1300	RG590	1334	RJ216	1368	RJ653	1402	RK144
	1301	RG593	1335	RJ223	1369	RJ656	1403	RK170
	1302	RG604	1336	RJ224	1370	RJ7	1404	RK211
15	1303	RG615	1337	RJ23	1371	RJ713	1405	RK216
	1304	RG631	1338	RJ243	1372	RJ719	1406	RK23
	1305	RG633	1339	RJ286	1373	RJ724	1407	RK253
	1306	RG636	1340	RJ288	1374	RJ727	1408	RK255
	1307	RG64	1341	RJ338	1375	RJ731	1409	RK260
20	1308	RG652	1342	RJ348	1376	RJ742	1410	RK265
	1309	RG656	1343	RJ353	1377	RJ749	1411	RK28
	1310	RG661	1344	RJ359	1378	RJ777	1412	RK41
	1311	RG663	1345	RJ361	1379	RJ779	1413	RK47
	1312	RG671	1346	RJ384	1380	RJ781	1414	RK59
25	1313	RH14	1347	RJ4	1381	RJ792	1415	RK65
	1314	RH17	1348	RJ402	1382	RJ8	1416	RK80
	1315	RH20	1349	RJ405	1383	RJ813	1417	RL106
	1316	RH22	1350	RJ431	1384	RJ828	1418	RL121
	1317	RH26	1351	RJ455	1385	RJ85	1419	RL122
30	1318	RH31	1352	RJ462	1386	RJ859	1420	RL128
	1319	RH41	1353	RJ465	1387	RJ870	1421	RL146
	1320	RH445	1354	RJ471	1388	RJ874	1422	RL15
	1321	RH510	1355	RJ482	1389	RJ890	1423	RL151
	1322	RI10	1356	RJ493	1390	RJ891	1424	RL169

	1425	RL188	1459	RL862	1493	RT1	1527	RU198
	1426	RL19	1460	RL87	1494	RT104	1528	RU199
	1427	RL245	1461	RL884	1495	RT11	1529	RU204
	1428	RL266	1462	RL885	1496	RT113	1530	RU220
5	1429	RL295	1463	RL886	1497	RT12	1531	RU233
	1430	RL310	1464	RL905	1498	RT120	1532	RU244
	1431	RL334	1465	RL957	1499	RT138	1533	RU255
	1432	RL336	1466	RL967	1500	RT15	1534	RU286
	1433	RL341	1467	RL969	1501	RT16	1535	RU288
10	1434	RL344	1468	RL979	1502	RT28	1536	RU292
	1435	RL356	1469	RM19	1503	RT34	1537	RU294
	1436	RL359	1470	RM26	1504	RT40	1538	RU327
	1437	RL360	1471	RN14	1505	RT42	1539	RU330
	1438	RL379	1472	RN17	1506	RT63	1540	RU333
15	1439	RL397	1473	RN43	1507	RT69	1541	RU355
	1440	RL455	1474	RN46	1508	RT70	1542	RU375
	1441	RL465	1475	RN55	1509	RT85	1543	RU388
	1442	RL487	1476	RN65	1510	RT88	1544	RU391
	1443	RL498	1477	RN75	1511	RT89	1545	RU50
20	1444	RL52	1478	RN81	1512	RT96	1546	RU71
	1445	RL565	1479	RN82	1513	RU11	1547	RU80
	1446	RL579	1480	RN85	1514	RU12	1548	RV106
	1447	RL606	1481	RP123	1515	RU120	1549	RV122
	1448	RL645	1482	RP146	1516	RU13	1550	RV144
25	1449	RL655	1483	RP161	1517	RU135	1551	RV15
	1450	RL693	1484	RP33	1518	RU14	1552	RV175
	1451	RL718	1485	RP34	1519	RU140	1553	RV21
	1452	RL721	1486	RP57	1520	RU146	1554	RV228
	1453	RL743	1487	RP81	1521	RU147	1555	RV239
30	1454	RL749	1488	RP87	1522	RU15	1556	RV247
	1455	RL808	1489	RQ15	1523	RU157	1557	RV252
	1456	RL83	1490	RR19	1524	RU172	1558	RV263
	1457	RL832	1491	RR20	1525	RU179	1559	RV271
	1458	RL840	1492	RS2	1526	RU182	1560	RV296

	1561	RV298	1595	RV805	1629	RX205	1663	RX536
	1562	RV305	1596	RV880	1630	RX209	1664	RX538
	1563	RV310	1597	RV9	1631	RX213	1665	RX554
	1564	RV319	1598	RW109	1632	RX22	1666	RX66
5	1565	RV422	1599	RW123	1633	RX245	1667	RX90
	1566	RV465	1600	RW193	1634	RX249	1668	RY140
	1567	RV476	1601	RW197	1635	RX252	1669	RY152
	1568	RV48	1602	RW253	1636	RX255	1670	RY193
	1569	RV49	1603	RW257	1637	RX263	1671	RY24
10	1570	RV490	1604	RW278	1638	RX282	1672	RY25
	1571	RV498	1605	RW290	1639	RX294	1673	RY295
	1572	RV504	1606	RW302	1640	RX314	1674	RY297
	1573	RV524	1607	RW344	1641	RX322	1675	RY307
	1574	RV555	1608	RW38	1642	RX326	1676	RY328
15	1575	RV576	1609	RW382	1643	RX332	1677	RY35
	1576	RV579	1610	RW440	1644	RX363	1678	RY385
	1577	RV598	1611	RW447	1645	RX373	1679	RY394
	1578	RV612	1612	RW456	1646	RX375	1680	RY418
	1579	RV627	1613	RW464	1647	RX392	1681	RY429
20	1580	RV634	1614	RW480	1648	RX40	1682	RY438
	1581	RV635	1615	RW488	1649	RX417	1683	RY450
	1582	RV637	1616	RW51	1650	RX419	1684	RY465
	1583	RV643	1617	RW513	1651	RX431	1685	RY47
	1584	RV656	1618	RW520	1652	RX443	1686	RY471
25	1585	RV681	1619	RW58	1653	RX466	1687	RY496
	1586	RV705	1620	RW661	1654	RX478	1688	RY535
	1587	RV707	1621	RW693	1655	RX479	1689	RY551
	1588	RV72	1622	RW84	1656	RX487	1690	RY580
	1589	RV724	1623	RX127	1657	RX491	1691	RY674
30	1590	RV759	1624	RX166	1658	RX499	1692	RY675
	1591	RV778	1625	RX176	1659	RX510	1693	RY681
	1592	RV796	1626	RX18	1660	RX527	1694	RY80
	1593	RV801	1627	RX185	1661	RX528	1695	RY81
	1594	RV803	1628	RX192	1662	RX534	1696	RZ126

	1697	RZ129	1731	SA139	1765	SB15	1799	SC265
	1698	RZ142	1732	SA140	1766	SB171	1800	SC271
	1699	RZ16	1733	SA323	1767	SB172	1801	SC273
	1700	RZ221	1734	SA33	1768	SB20	1802	SC294
5	1701	RZ224	1735	SA331	1769	SB228	1803	SC296
	1702	RZ226	1736	SA34	1770	SB230	1804	SC298
	1703	RZ262	1737	SA361	1771	SB236	1805	SC318
	1704	RZ304	1738	SA404	1772	SB250	1806	SC341
	1705	RZ323	1739	SA481	1773	SB256	1807	SC359
10	1706	RZ361	1740	SA488	1774	SB276	1808	SC370
	1707	RZ405	1741	SA493	1775	SB280	1809	SC382
	1708	RZ409	1742	SA508	1776	SB342	1810	SC394
	1709	RZ411	1743	SA537	1777	SB36	1811	SC40
	1710	RZ425	1744	SA539	1778	SB39	1812	SC401
15	1711	RZ435	1745	SA543	1779	SB44	1813	SC404
	1712	RZ44	1746	SA569	1780	SB49	1814	SC46
	1713	RZ454	1747	SA570	1781	SB66	1815	SC58
	1714	RZ514	1748	SA576	1782	SB86	1816	SC59
	1715	RZ527	1749	SA601	1783	SC115	1817	SC88
20	1716	RZ553	1750	SA624	1784	SC117	1818	SC89
	1717	RZ568	1751	SA627	1785	SC136	1819	SD55
	1718	RZ599	1752	SA629	1786	SC144	1820	SE42
	1719	RZ610	1753	SA638	1787	SC145	1821	SE71
	1720	RZ627	1754	SA643	1788	SC163	1822	SF120
25	1721	RZ664	1755	SA649	1789	SC164	1823	SF124
	1722	RZ670	1756	SA664	1790	SC17	1824	SF125
	1723	RZ692	1757	SA679	1791	SC173	1825	SF138
	1724	RZ698	1758	SA74	1792	SC176	1826	SF146
	1725	RZ730	1759	SA79	1793	SC193	1827	SF156
30	1726	S1	1760	SB12	1794	SC199	1828	SF172
	1727	S199	1761	SB123	1795	SC209	1829	SF173
	1728	SA120	1762	SB147	1796	SC226	1830	SF180
	1729	SA122	1763	SB148	1797	SC244	1831	SF184
	1730	SA124	1764	SB149	1798	SC245	1832	SF206

	1833	SF222	1867	SF59	1901	SG352	1935	WG63
	1834	SF226	1868	SF592	1902	SG77	1936	WG67
	1835	SF240	1869	SF601	1903	T85	1937	WG75
	1836	SF245	1870	SF608	1904	V207	1938	WG76
5	1837	SF249	1871	SF624	1905	V222	1939	WG77
	1838	SF265	1872	SF626	1906	WA109	1940	WG9
	1839	SF275	1873	SF637	1907	WA118	1941	WG90
	1840	SF286	1874	SF67	1908	WA129	1942	WG93
	1841	SF292	1875	SF69	1909	WA135	1943	WG94
10	1842	SF302	1876	SF78	1910	WA15	1944	WH101
	1843	SF303	1877	SF98	1911	WA153	1945	WH110
	1844	SF307	1878	SG1	1912	WA154	1946	WH113
	1845	SF309	1879	SG122	1913	WA545	1947	WH114
	1846	SF315	1880	SG124	1914	WC73	1948	WH117
15	1847	SF339	1881	SG126	1915	WC74	1949	WH119
	1848	SF34	1882	SG127	1916	WC88	1950	WH120
	1849	SF340	1883	SG148	1917	WF2	1951	WH128
	1850	SF348	1884	SG15	1918	WF3	1952	WH129
	1851	SF371	1885	SG169	1919	WF4	1953	WH13
20	1852	SF379	1886	SG213	1920	WG14	1954	WH130
	1853	SF401	1887	SG243	1921	WG21	1955	WH133
	1854	SF429	1888	SG261	1922	WG24	1956	WH135
	1855	SF442	1889	SG262	1923	WG26	1957	WH140
	1856	SF444	1890	SG272	1924	WG30	1958	WH142
25	1857	SF445	1891	SG275	1925	WG31	1959	WH146
	1858	SF465	1892	SG281	1926	WG32	1960	WH150
	1859	SF472	1893	SG293	1927	WG34	1961	WH155
	1860	SF497	1894	SG295	1928	WG39	1962	WH16
	1861	SF499	1895	SG312	1929	WG41	1963	WH169
30	1862	SF50	1896	SG334	1930	WG44	1964	WH17
	1863	SF517	1897	SG335	1931	WG53	1965	WH170
	1864	SF553	1898	SG345	1932	WG55	1966	WH175
	1865	SF577	1899	SG347	1933	WG59	1967	WH178
	1866	SF582	1900	SG35	1934	WG62	1968	WH179

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	1969	WH180	2003	WI143	2037	WJ200	2071	WL554
	1970	WH181	2004	WI144	2038	WJ202	2072	WL556
	1971	WH185	2005	WI145	2039	WJ231	2073	WL560
	1972	WH200	2006	WI150	2040	WJ233	2074	WL561
5	1973	WH204	2007	WI152	2041	WJ236	2075	WL566
	1974	WH209	2008	WI156	2042	WJ238	2076	WL567
	1975	WH211	2009	WI168	2043	WJ243	2077	WL570
	1976	WH214	2010	WI173	2044	WJ245	2078	WL580
	1977	WH216	2011	WI175	2045	WJ248	2079	WL582
10	1978	WH219	2012	WI178	2046	WJ275	2080	WL637
	1979	WH22	2013	WI18	2047	WJ289	2081	WL644
	1980	WH224	2014	WI181	2048	WJ291	2082	WL647
	1981	WH230	2015	WI232	2049	WJ295	2083	WL657
	1982	WH26	2016	WI233	2050	WJ296	2084	WL663
15	1983	WH27	2017	WI234	2051	WJ301	2085	WL664
	1984	WH3	2018	WI239	2052	WK159	2086	WL666
	1985	WH30	2019	WI243	2053	WK168	2087	Z107
	1986	WH39	2020	WI244	2054	WK172	2088	Z123
	1987	WH40	2021	WI246	2055	WK174	2089	Z132
20	1988	WH43	2022	WI248	2056	WK177	2090	Z134
	1989	WH44	2023	WI251	2057	WK178	2091	Z135
	1990	WH47	2024	WI257	2058	WK185	2092	Z139
	1991	WI1	2025	WI265	2059	WK199	2093	Z145
	1992	WI108	2026	WI266	2060	WK200	2094	Z217
25	1993	WI109	2027	WI267	2061	WK215	2095	Z218
	1994	WI114	2028	WI268	2062	WK220	2096	Z243
	1995	WI116	2029	WI270	2063	WK225	2097	Z250
	1996	WI119	2030	WI44	2064	WK228	2098	Z253
	1997	WI12	2031	WI9	2065	WK234	2099	Z254
30	1998	WI125	2032	WI96	2066	WK247	2100	Z256
	1999	WI13	2033	WJ168	2067	WL503	2101	Z260
	2000	WI131	2034	WJ176	2068	WL508	2102	Z286
	2001	WI139	2035	WJ192	2069	WL519	2103	Z287
	2002	WI142	2036	WJ193	2070	WL546	2104	Z288

	2105	Z294	2139	Z729
	2106	Z320	2140	Z738
	2107	Z327	2141	Z743
	2108	Z328	2142	Z747
5	2109	Z338	2143	Z748
	2110	Z343	2144	Z749
	2111	Z372	2145	Z750
	2112	Z391	2146	Z756
	2113	Z415	2147	Z768
10	2114	Z450	2148	Z769
	2115	Z459	2149	Z792
	2116	Z469	2150	Z805
	2117	Z480	2151	Z806
	2118	Z497	2152	Z837
15	2119	Z504	2153	Z843
	2120	Z577	2154	Z847
	2121	Z584	2155	Z852
	2122	Z590	2156	Z856
	2123	Z594	2157	Z864
20	2124	Z599	2158	Z865
	2125	Z603	2159	Z871
	2126	Z607		
	2127	Z610		
	2128	Z617		
25	2129	Z624		
	2130	Z631		
	2131	Z633		
	2132	Z654		
	2133	Z656		
30	2134	Z660		
	2135	Z666		
	2136	Z674		
	2137	Z677		
	2138	Z719		

The "Clone ID No." for a particular clone consists of one or two letters followed by a number. The letters designate the tissue source from which the sEST was isolated. Table 3 below lists the various sources which were run through applicants' signal sequence trap. Thus, the tissue source for a particular sEST sequence can be identified
5 in Table 3 by the one and two letter designations used in the relevant "Clone ID No." in Table 2. For example, a clone designated as "PP85" would have been isolated from a human adult blood (lymphoblastic leukemia MOLT-4) library (i.e., selection "PP") as indicated in Table 3.

As used herein, "polynucleotide" includes single- and double-stranded RNAs,
10 DNAs and RNA:DNA hybrids.

As used herein a "secreted" protein is one which, when expressed in a suitable host cell, is transported across or through a membrane, including transport as a result of signal sequences in its amino acid sequence. "Secreted" proteins include without limitation proteins secreted wholly (e.g., soluble proteins) or partially (e.g., receptors)
15 from the cell in which they are expressed. "Secreted" proteins also include without limitation proteins which are transported across the membrane of the endoplasmic reticulum.

Fragments of the proteins of the present invention which are capable of exhibiting biological activity are also encompassed by the present invention.
20 Fragments of the protein may be in linear form or they may be cyclized using known methods, for example, as described in H.U. Saragovi, *et al.*, *Bio/Technology* 10, 773-778 (1992) and in R.S. McDowell, *et al.*, *J. Amer. Chem. Soc.* 114, 9245-9253 (1992), both of which are incorporated herein by reference. Such fragments may be fused to carrier molecules such as immunoglobulins for many purposes, including increasing
25 the valency of protein binding sites. For example, fragments of the protein may be fused through "linker" sequences to the Fc portion of an immunoglobulin. For a bivalent form of the protein, such a fusion could be to the Fc portion of an IgG molecule. Other immunoglobulin isotypes may also be used to generate such fusions. For example, a protein - IgM fusion would generate a decavalent form of the protein
30 of the invention.

The present invention also provides both full-length and mature forms of the disclosed proteins. The full-length form of the such proteins is identified in the sequence listing by translation of the nucleotide sequence of each disclosed clone. The mature form(s) of such protein may be obtained by expression of the disclosed

full-length polynucleotide (preferably those deposited with ATCC) in a suitable mammalian cell or other host cell. The sequence(s) of the mature form(s) of the protein may also be determinable from the amino acid sequence of the full-length form.

5 The present invention also provides genes corresponding to the polynucleotide sequences disclosed herein. "Corresponding genes" are the regions of the genome that are transcribed to produce the mRNAs from which cDNA polynucleotide sequences are derived and may include contiguous regions of the genome necessary for the regulated expression of such genes. Corresponding genes
10 may therefore include but are not limited to coding sequences, 5' and 3' untranslated regions, alternatively spliced exons, introns, promoters, enhancers, and silencer or suppressor elements. The corresponding genes can be isolated in accordance with known methods using the sequence information disclosed herein. Such methods include the preparation of probes or primers from the disclosed sequence information
15 for identification and/or amplification of genes in appropriate genomic libraries or other sources of genomic materials. An "isolated gene" is a gene that has been separated from the adjacent coding sequences, if any, present in the genome of the organism from which the gene was isolated.

 The chromosomal location corresponding to the polynucleotide sequences
20 disclosed herein may also be determined, for example by hybridizing appropriately labeled polynucleotides of the present invention to chromosomes *in situ*. It may also be possible to determine the corresponding chromosomal location for a disclosed polynucleotide by identifying significantly similar nucleotide sequences in public databases, such as expressed sequence tags (ESTs), that have already been mapped
25 to particular chromosomal locations. For at least some of the polynucleotide sequences disclosed herein, public database sequences having at least some similarity to the polynucleotide of the present invention have been listed by database accession number. Searches using the GenBank accession numbers of these public database sequences can then be performed at an Internet site provided by the National Center
30 for Biotechnology Information having the address www.ncbi.nlm.nih.gov/UniGene, in order to identify "UniGene clusters" of overlapping sequences. Many of the "UniGene clusters" so identified will already have been mapped to particular chromosomal sites.

Organisms that have enhanced, reduced, or modified expression of the gene(s) corresponding to the polynucleotide sequences disclosed herein are provided. The desired change in gene expression can be achieved through the use of antisense polynucleotides or ribozymes that bind and/or cleave the mRNA transcribed from the gene (Albert and Morris, 1994, *Trends Pharmacol. Sci.* 15(7): 250-254; Lavarosky et al., 1997, *Biochem. Mol. Med.* 62(1): 11-22; and Hampel, 1998, *Prog. Nucleic Acid Res. Mol. Biol.* 58: 1-39; all of which are incorporated by reference herein). Transgenic animals that have multiple copies of the gene(s) corresponding to the polynucleotide sequences disclosed herein, preferably produced by transformation of cells with genetic constructs that are stably maintained within the transformed cells and their progeny, are provided. Transgenic animals that have modified genetic control regions that increase or reduce gene expression levels, or that change temporal or spatial patterns of gene expression, are also provided (see European Patent No. 0 649 464 B1, incorporated by reference herein). In addition, organisms are provided in which the gene(s) corresponding to the polynucleotide sequences disclosed herein have been partially or completely inactivated, through insertion of extraneous sequences into the corresponding gene(s) or through deletion of all or part of the corresponding gene(s). Partial or complete gene inactivation can be accomplished through insertion, preferably followed by imprecise excision, of transposable elements (Plasterk, 1992, *Bioessays* 14(9): 629-633; Zwaal et al., 1993, *Proc. Natl. Acad. Sci. USA* 90(16): 7431-7435; Clark et al., 1994, *Proc. Natl. Acad. Sci. USA* 91(2): 719-722; all of which are incorporated by reference herein), or through homologous recombination, preferably detected by positive/negative genetic selection strategies (Mansour et al., 1988, *Nature* 336: 348-352; U.S. Patent Nos. 5,464,764; 5,487,992; 5,627,059; 5,631,153; 5,614,396; 5,616,491; and 5,679,523; all of which are incorporated by reference herein). These organisms with altered gene expression are preferably eukaryotes and more preferably are mammals. Such organisms are useful for the development of non-human models for the study of disorders involving the corresponding gene(s), and for the development of assay systems for the identification of molecules that interact with the protein product(s) of the corresponding gene(s).

Where the protein of the present invention is membrane-bound (e.g., is a receptor), the present invention also provides for soluble forms of such protein. In such forms part or all of the intracellular and transmembrane domains of the protein

are deleted such that the protein is fully secreted from the cell in which it is expressed. The intracellular and transmembrane domains of proteins of the invention can be identified in accordance with known techniques for determination of such domains from sequence information.

5 Proteins and protein fragments of the present invention include proteins with amino acid sequence lengths that are at least 25% (more preferably at least 50%, and most preferably at least 75%) of the length of a disclosed protein and have at least 60% sequence identity (more preferably, at least 75% identity; most preferably at least 90% or 95% identity) with that disclosed protein, where sequence identity is
10 determined by comparing the amino acid sequences of the proteins when aligned so as to maximize overlap and identity while minimizing sequence gaps. Also included in the present invention are proteins and protein fragments that contain a segment preferably comprising 8 or more (more preferably 20 or more, most preferably 30 or more) contiguous amino acids that shares at least 75% sequence identity (more
15 preferably, at least 85% identity; most preferably at least 95% identity) with any such segment of any of the disclosed proteins.

In particular, sequence identity may be determined using WU-BLAST (Washington University BLAST) version 2.0 software, which builds upon WU-BLAST version 1.4, which in turn is based on the public domain NCBI-BLAST
20 version 1.4 (Altschul and Gish, 1996, Local alignment statistics, Doolittle *ed.*, *Methods in Enzymology* **266**: 460-480; Altschul *et al.*, 1990, Basic local alignment search tool, *Journal of Molecular Biology* **215**: 403-410; Gish and States, 1993, Identification of protein coding regions by database similarity search, *Nature Genetics* **3**: 266-272; Karlin and Altschul, 1993, Applications and statistics for multiple
25 high-scoring segments in molecular sequences, *Proc. Natl. Acad. Sci. USA* **90**: 5873-5877; all of which are incorporated by reference herein). WU-BLAST version 2.0 executable programs for several UNIX platforms can be downloaded from the Internet file-transfer protocol (FTP) site <ftp://blast.wustl.edu/blast/executables>. The complete suite of search programs (BLASTP, BLASTN, BLASTX, TBLASTN, and
30 TBLASTX) is provided at that site, in addition to several support programs. WU-BLAST 2.0 is copyrighted and may not be sold or redistributed in any form or manner without the express written consent of the author; but the posted executables

may otherwise be freely used for commercial, nonprofit, or academic purposes. In all search programs in the suite -- BLASTP, BLASTN, BLASTX, TBLASTN and TBLASTX -- the gapped alignment routines are integral to the database search itself, and thus yield much better sensitivity and selectivity while producing the more easily
5 interpreted output. Gapping can optionally be turned off in all of these programs, if desired. The default penalty (Q) for a gap of length one is Q=9 for proteins and BLASTP, and Q=10 for BLASTN, but may be changed to any integer value including zero, one through eight, nine, ten, eleven, twelve through twenty, twenty-one through fifty, fifty-one through one hundred, etc. The default per-residue penalty for extending
10 a gap (R) is R=2 for proteins and BLASTP, and R=10 for BLASTN, but may be changed to any integer value including zero, one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve through twenty, twenty-one through fifty, fifty-one through one hundred, etc. Any combination of values for Q and R can be used in order to align sequences so as to maximize overlap and identity while minimizing
15 sequence gaps. The default amino acid comparison matrix is BLOSUM62, but other amino acid comparison matrices such as PAM can be utilized.

Species homologues of the disclosed polynucleotides and proteins are also provided by the present invention. As used herein, a "species homologue" is a protein or polynucleotide with a different species of origin from that of a given protein
20 or polynucleotide, but with significant sequence similarity to the given protein or polynucleotide. Preferably, polynucleotide species homologues have at least 60% sequence identity (more preferably, at least 75% identity; most preferably at least 90% identity) with the given polynucleotide, and protein species homologues have at least
25 30% sequence identity (more preferably, at least 45% identity; most preferably at least 60% identity) with the given protein, where sequence identity is determined by comparing the nucleotide sequences of the polynucleotides or the amino acid sequences of the proteins when aligned so as to maximize overlap and identity while minimizing sequence gaps. Species homologues may be isolated and identified by making suitable probes or primers from the sequences provided herein and screening
30 a suitable nucleic acid source from the desired species. Preferably, species homologues are those isolated from mammalian species. Most preferably, species homologues are those isolated from certain mammalian species such as, for example,

Pan troglodytes, *Gorilla gorilla*, *Pongo pygmaeus*, *Hylobates concolor*, *Macaca mulatta*, *Papio papio*, *Papio hamadryas*, *Cercopithecus aethiops*, *Cebus capucinus*, *Aotus trivirgatus*, *Sanguinus oedipus*, *Microcebus murinus*, *Mus musculus*, *Rattus norvegicus*, *Cricetulus griseus*, *Felis catus*, *Mustela vison*, *Canis familiaris*, *Oryctolagus cuniculus*, *Bos taurus*, *Ovis aries*, *Sus scrofa*, and *Equus caballus*, for which genetic maps have been created allowing the identification of syntenic relationships between the genomic organization of genes in one species and the genomic organization of the related genes in another species (O'Brien and Seuánez, 1988, *Ann. Rev. Genet.* 22: 323-351; O'Brien *et al.*, 1993, *Nature Genetics* 3:103-112; Johansson *et al.*, 1995, *Genomics* 25: 682-690; Lyons *et al.*, 1997, *Nature Genetics* 15: 47-56; O'Brien *et al.*, 1997, *Trends in Genetics* 13(10): 393-399; Carver and Stubbs, 1997, *Genome Research* 7:1123-1137; all of which are incorporated by reference herein).

The invention also encompasses allelic variants of the disclosed polynucleotides or proteins; that is, naturally-occurring alternative forms of the isolated polynucleotides which also encode proteins which are identical or have significantly similar sequences to those encoded by the disclosed polynucleotides. Preferably, allelic variants have at least 60% sequence identity (more preferably, at least 75% identity; most preferably at least 90% identity) with the given polynucleotide, where sequence identity is determined by comparing the nucleotide sequences of the polynucleotides when aligned so as to maximize overlap and identity while minimizing sequence gaps. Allelic variants may be isolated and identified by making suitable probes or primers from the sequences provided herein and screening a suitable nucleic acid source from individuals of the appropriate species.

The invention also includes polynucleotides with sequences complementary to those of the polynucleotides disclosed herein.

The present invention also includes polynucleotides that hybridize under reduced stringency conditions, more preferably stringent conditions, and most preferably highly stringent conditions, to polynucleotides described herein. Examples of stringency conditions are shown in the table below: highly stringent conditions are those that are at least as stringent as, for example, conditions A-F; stringent conditions are at least as stringent as, for example, conditions G-L; and reduced stringency conditions are at least as stringent as, for example, conditions M-R.

	Stringency Condition	Polynucleotide Hybrid	Hybrid Length (bp) [‡]	Hybridization Temperature and Buffer [†]	Wash Temperature and Buffer [†]
5	A	DNA:DNA	≥ 50	65°C; 1xSSC -or- 42°C; 1xSSC, 50% formamide	65°C; 0.3xSSC
	B	DNA:DNA	<50	T _B *; 1xSSC	T _B *; 1xSSC
	C	DNA:RNA	≥ 50	67°C; 1xSSC -or- 45°C; 1xSSC, 50% formamide	67°C; 0.3xSSC
	D	DNA:RNA	<50	T _D *; 1xSSC	T _D *; 1xSSC
	E	RNA:RNA	≥ 50	70°C; 1xSSC -or- 50°C; 1xSSC, 50% formamide	70°C; 0.3xSSC
	F	RNA:RNA	<50	T _F *; 1xSSC	T _F *; 1xSSC
10	G	DNA:DNA	≥ 50	65°C; 4xSSC -or- 42°C; 4xSSC, 50% formamide	65°C; 1xSSC
	H	DNA:DNA	<50	T _H *; 4xSSC	T _H *; 4xSSC
	I	DNA:RNA	≥ 50	67°C; 4xSSC -or- 45°C; 4xSSC, 50% formamide	67°C; 1xSSC
	J	DNA:RNA	<50	T _J *; 4xSSC	T _J *; 4xSSC
	K	RNA:RNA	≥ 50	70°C; 4xSSC -or- 50°C; 4xSSC, 50% formamide	67°C; 1xSSC
	L	RNA:RNA	<50	T _L *; 2xSSC	T _L *; 2xSSC
15	M	DNA:DNA	≥ 50	50°C; 4xSSC -or- 40°C; 6xSSC, 50% formamide	50°C; 2xSSC
	N	DNA:DNA	<50	T _N *; 6xSSC	T _N *; 6xSSC
	O	DNA:RNA	≥ 50	55°C; 4xSSC -or- 42°C; 6xSSC, 50% formamide	55°C; 2xSSC
	P	DNA:RNA	<50	T _P *; 6xSSC	T _P *; 6xSSC
	Q	RNA:RNA	≥ 50	60°C; 4xSSC -or- 45°C; 6xSSC, 50% formamide	60°C; 2xSSC
	R	RNA:RNA	<50	T _R *; 4xSSC	T _R *; 4xSSC

[‡]: The hybrid length is that anticipated for the hybridized region(s) of the hybridizing polynucleotides. When hybridizing a polynucleotide to a target polynucleotide of unknown sequence, the hybrid length is assumed to be that of the hybridizing polynucleotide. When polynucleotides of known sequence are hybridized, the hybrid length can be determined by aligning the sequences of the polynucleotides and identifying the region or regions of optimal sequence complementarity.

[†]: SSPE (1xSSPE is 0.15M NaCl, 10mM NaH₂PO₄, and 1.25mM EDTA, pH 7.4) can be substituted for SSC (1xSSC is 0.15M NaCl and 15mM sodium citrate) in the hybridization and wash buffers; washes are performed for 15 minutes after hybridization is complete.

*T_B - T_R: The hybridization temperature for hybrids anticipated to be less than 50 base pairs in length should be 5-10°C less than the melting temperature (T_m) of the hybrid, where T_m is determined according to the following equations. For hybrids less than 18 base pairs in length, T_m(°C) = 2(# of A + T bases) + 4(# of G + C bases). For hybrids between 18 and 49 base

pairs in length, $T_m(^{\circ}\text{C}) = 81.5 + 16.6(\log_{10}[\text{Na}^+]) + 0.41(\%G+C) - (600/N)$, where N is the number of bases in the hybrid, and $[\text{Na}^+]$ is the concentration of sodium ions in the hybridization buffer ($[\text{Na}^+]$ for 1xSSC = 0.165 M).

5 Additional examples of stringency conditions for polynucleotide hybridization are provided in Sambrook, J., E.F. Fritsch, and T. Maniatis, 1989, *Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, chapters 9 and 11, and *Current Protocols in Molecular Biology*, 1995, F.M. Ausubel et al., eds., John Wiley & Sons, Inc., sections 2.10 and 6.3-6.4,
10 incorporated herein by reference.

Preferably, each such hybridizing polynucleotide has a length that is at least 25% (more preferably at least 50%, and most preferably at least 75%) of the length of the polynucleotide of the present invention to which it hybridizes, and has at least 60% sequence identity (more preferably, at least 75% identity; most preferably at least
15 90% or 95% identity) with the polynucleotide of the present invention to which it hybridizes, where sequence identity is determined by comparing the sequences of the hybridizing polynucleotides when aligned so as to maximize overlap and identity while minimizing sequence gaps.

The isolated polynucleotide of the invention may contain sequences at its 5' and/or 3' end that are derived from linker, polylinker, or multiple cloning site sequences commonly found in vectors such as the pMT2 or pED expression vectors (see below). For example, sequences such as SEQ ID NO:2160, SEQ ID NO:2161, or SEQ ID NO:2162 may be found at the 5' end of an isolated polynucleotide of the invention, or the complement of any of these sequences may be found at its 3' end.
20 Similarly, sequences such as SEQ ID NO:2163, SEQ ID NO:2164, or SEQ ID NO:2165 may be found at the 3' end of an isolated polynucleotide of the invention, or the complement of any of these sequences may be found at its 5' end. In addition, variants of these linker sequences may be present in isolated polynucleotides of the invention, which linker variants vary from SEQ ID NO:2160 through SEQ ID NO:2165
25 by the alteration, insertion, or deletion of one or more nucleotides. Therefore, a preferred embodiment of the invention comprises the nucleotide sequence of any of the isolated polynucleotides disclosed herein, beginning at nucleotide 25 and ending at nucleotide (N-25) of the SEQ ID NO for that polynucleotide, where N represents the total number of nucleotides in the sequence. As a specific example, a preferred
30 embodiment of the invention comprises the nucleotide sequence of SEQ ID NO:1
35

from nucleotide 25 to nucleotide 180, where the total number of nucleotides (N) in SEQ ID NO:1 is 205, and N-25 equals 180. More preferably, a polynucleotide of the invention comprises the nucleotide sequence of any of the isolated polynucleotides disclosed herein, beginning at nucleotide 30 and ending at nucleotide (N-30) of the
5 SEQ ID NO for that polynucleotide. Most preferably, a polynucleotide of the invention comprises the nucleotide sequence of any of the isolated polynucleotides disclosed herein, beginning at nucleotide 35 and ending at nucleotide (N-35) of the SEQ ID NO for that polynucleotide.

The isolated polynucleotide of the invention may be operably linked to an
10 expression control sequence such as the pMT2 or pED expression vectors disclosed in Kaufman *et al.*, Nucleic Acids Res. 19, 4485-4490 (1991), in order to produce the protein recombinantly. Many suitable expression control sequences are known in the art. General methods of expressing recombinant proteins are also known and are exemplified in R. Kaufman, Methods in Enzymology 185, 537-566 (1990). As defined
15 herein "operably linked" means that the isolated polynucleotide of the invention and an expression control sequence are situated within a vector or cell in such a way that the protein is expressed by a host cell which has been transformed (transfected) with the ligated polynucleotide/expression control sequence.

A number of types of cells may act as suitable host cells for expression of the
20 protein. Mammalian host cells include, for example, monkey COS cells, Chinese Hamster Ovary (CHO) cells, human kidney 293 cells, human epidermal A431 cells, human Colo205 cells, 3T3 cells, CV-1 cells, other transformed primate cell lines, normal diploid cells, cell strains derived from in vitro culture of primary tissue, primary explants, HeLa cells, mouse L cells, BHK, HL-60, U937, HaK or Jurkat cells.

25 Alternatively, it may be possible to produce the protein in lower eukaryotes such as yeast or in prokaryotes such as bacteria. Potentially suitable yeast strains include *Saccharomyces cerevisiae*, *Schizosaccharomyces pombe*, *Kluyveromyces* strains, *Candida*, or any yeast strain capable of expressing heterologous proteins. Potentially suitable bacterial strains include *Escherichia coli*, *Bacillus subtilis*, *Salmonella*
30 *typhimurium*, or any bacterial strain capable of expressing heterologous proteins. If the protein is made in yeast or bacteria, it may be necessary to modify the protein produced therein, for example by phosphorylation or glycosylation of the appropriate sites, in order to obtain the functional protein. Such covalent attachments may be accomplished using known chemical or enzymatic methods.

The protein may also be produced by operably linking the isolated polynucleotide of the invention to suitable control sequences in one or more insect expression vectors, and employing an insect expression system. Materials and methods for baculovirus/insect cell expression systems are commercially available in kit form from, *e.g.*, Invitrogen, San Diego, California, U.S.A. (the MaxBac® kit), and such methods are well known in the art, as described in Summers and Smith, Texas Agricultural Experiment Station Bulletin No. 1555 (1987), incorporated herein by reference. As used herein, an insect cell capable of expressing a polynucleotide of the present invention is "transformed."

10 The protein of the invention may be prepared by culturing transformed host cells under culture conditions suitable to express the recombinant protein. The resulting expressed protein may then be purified from such culture (*i.e.*, from culture medium or cell extracts) using known purification processes, such as gel filtration and ion exchange chromatography. The purification of the protein may also include an affinity column containing agents which will bind to the protein; one or more column steps over such affinity resins as concanavalin A-agarose, heparin-toyopearl® or Cibacrom blue 3GA Sepharose®; one or more steps involving hydrophobic interaction chromatography using such resins as phenyl ether, butyl ether, or propyl ether; or immunoaffinity chromatography.

20 Alternatively, the protein of the invention may also be expressed in a form which will facilitate purification. For example, it may be expressed as a fusion protein, such as those of maltose binding protein (MBP), glutathione-S-transferase (GST) or thioredoxin (TRX). Kits for expression and purification of such fusion proteins are commercially available from New England BioLabs (Beverly, MA), Pharmacia (Piscataway, NJ) and Invitrogen Corporation (Carlsbad, CA), respectively. 25 The protein can also be tagged with an epitope and subsequently purified by using a specific antibody directed to such epitope. One such epitope ("Flag") is commercially available from the Eastman Kodak Company (New Haven, CT).

Finally, one or more reverse-phase high performance liquid chromatography 30 (RP-HPLC) steps employing hydrophobic RP-HPLC media, *e.g.*, silica gel having pendant methyl or other aliphatic groups, can be employed to further purify the protein. Some or all of the foregoing purification steps, in various combinations, can also be employed to provide a substantially homogeneous isolated recombinant

protein. The protein thus purified is substantially free of other mammalian proteins and is defined in accordance with the present invention as an "isolated protein."

The protein of the invention may also be expressed as a product of transgenic animals, e.g., as a component of the milk of transgenic cows, goats, pigs, or sheep
5 which are characterized by somatic or germ cells containing a nucleotide sequence encoding the protein.

The protein may also be produced by known conventional chemical synthesis. Methods for constructing the proteins of the present invention by synthetic means are known to those skilled in the art. The synthetically-constructed protein sequences,
10 by virtue of sharing primary, secondary or tertiary structural and/or conformational characteristics with proteins may possess biological properties in common therewith, including protein activity. Thus, they may be employed as biologically active or immunological substitutes for natural, purified proteins in screening of therapeutic compounds and in immunological processes for the development of antibodies.

15 The proteins provided herein also include proteins characterized by amino acid sequences similar to those of purified proteins but into which modification are naturally provided or deliberately engineered. For example, modifications in the peptide or DNA sequences can be made by those skilled in the art using known techniques. Modifications of interest in the protein sequences may include the
20 alteration, substitution, replacement, insertion or deletion of a selected amino acid residue in the coding sequence. For example, one or more of the cysteine residues may be deleted or replaced with another amino acid to alter the conformation of the molecule. Techniques for such alteration, substitution, replacement, insertion or deletion are well known to those skilled in the art (see, e.g., U.S. Patent No.
25 4,518,584). Preferably, such alteration, substitution, replacement, insertion or deletion retains the desired activity of the protein.

Other fragments and derivatives of the sequences of proteins which would be expected to retain protein activity in whole or in part and may thus be useful for screening or other immunological methodologies may also be easily made by those
30 skilled in the art given the disclosures herein. Such modifications are believed to be encompassed by the present invention.

USES AND BIOLOGICAL ACTIVITY

The polynucleotides and proteins of the present invention are expected to exhibit one or more of the uses or biological activities (including those associated with assays cited herein) identified below. Uses or activities described for proteins of the present invention may be provided by administration or use of such proteins or by administration or use of polynucleotides encoding such proteins (such as, for example, in gene therapies or vectors suitable for introduction of DNA).

Research Uses and Utilities

The polynucleotides provided by the present invention can be used by the research community for various purposes. The primary use of polynucleotides of the invention which are sESTs is as probes for the identification and isolation of full-length cDNAs and genomic DNA molecules which correspond (i.e., is a longer polynucleotide sequence of which substantially the entire sEST is a fragment in the case of a full-length cDNA, or which encodes the sEST in the case of a genomic DNA molecule) to such sESTs. Techniques for use of such sequences as probes for larger cDNAs or genomic molecules are well known in the art.

The polynucleotides can also be used to express recombinant protein for analysis, characterization or therapeutic use; as markers for tissues in which the corresponding protein is preferentially expressed (either constitutively or at a particular stage of tissue differentiation or development or in disease states); as molecular weight markers on Southern gels; as chromosome markers or tags (when labeled) to identify chromosomes or to map related gene positions; to compare with endogenous DNA sequences in patients to identify potential genetic disorders; as probes to hybridize and thus discover novel, related DNA sequences; as a source of information to derive PCR primers for genetic fingerprinting; as a probe to "subtract-out" known sequences in the process of discovering other novel polynucleotides; for selecting and making oligomers for attachment to a "gene chip" or other support, including for examination of expression patterns; to raise anti-protein antibodies using DNA immunization techniques; and as an antigen to raise anti-DNA antibodies or elicit another immune response. Where the polynucleotide encodes a protein which binds or potentially binds to another protein (such as, for example, in a receptor-ligand interaction), the polynucleotide can also be used in interaction trap assays (such as, for example, that described in Gyuris et al., Cell 75:791-803 (1993)) to

identify polynucleotides encoding the other protein with which binding occurs or to identify inhibitors of the binding interaction.

The proteins provided by the present invention can similarly be used in assay to determine biological activity, including in a panel of multiple proteins for high-throughput screening; to raise antibodies or to elicit another immune response; as a reagent (including the labeled reagent) in assays designed to quantitatively determine levels of the protein (or its receptor) in biological fluids; as markers for tissues in which the corresponding protein is preferentially expressed (either constitutively or at a particular stage of tissue differentiation or development or in a disease state); and, of course, to isolate correlative receptors or ligands. Where the protein binds or potentially binds to another protein (such as, for example, in a receptor-ligand interaction), the protein can be used to identify the other protein with which binding occurs or to identify inhibitors of the binding interaction. Proteins involved in these binding interactions can also be used to screen for peptide or small molecule inhibitors or agonists of the binding interaction.

Any or all of these research utilities are capable of being developed into reagent grade or kit format for commercialization as research products.

Methods for performing the uses listed above are well known to those skilled in the art. References disclosing such methods include without limitation "Molecular Cloning: A Laboratory Manual", 2d ed., Cold Spring Harbor Laboratory Press, Sambrook, J., E.F. Fritsch and T. Maniatis eds., 1989, and "Methods in Enzymology: Guide to Molecular Cloning Techniques", Academic Press, Berger, S.L. and A.R. Kimmel eds., 1987.

Nutritional Uses

Polynucleotides and proteins of the present invention can also be used as nutritional sources or supplements. Such uses include without limitation use as a protein or amino acid supplement, use as a carbon source, use as a nitrogen source and use as a source of carbohydrate. In such cases the protein or polynucleotide of the invention can be added to the feed of a particular organism or can be administered as a separate solid or liquid preparation, such as in the form of powder, pills, solutions, suspensions or capsules. In the case of microorganisms, the protein or polynucleotide of the invention can be added to the medium in or on which the microorganism is cultured.

Cytokine and Cell Proliferation/Differentiation Activity

A protein of the present invention may exhibit cytokine, cell proliferation (either inducing or inhibiting) or cell differentiation (either inducing or inhibiting) activity or may induce production of other cytokines in certain cell populations.

- 5 Many protein factors discovered to date, including all known cytokines, have exhibited activity in one or more factor dependent cell proliferation assays, and hence the assays serve as a convenient confirmation of cytokine activity. The activity of a protein of the present invention is evidenced by any one of a number of routine factor dependent cell proliferation assays for cell lines including, without limitation, 32D, 10 DA2, DA1G, T10, B9, B9/11, BaF3, MC9/G, M+ (preB M+), 2E8, RB5, DA1, 123, T1165, HT2, CTLL2, TF-1, Mo7e and CMK.

The activity of a protein of the invention may, among other means, be measured by the following methods:

- Assays for T-cell or thymocyte proliferation include without limitation those 15 described in: *Current Protocols in Immunology*, Ed by J. E. Coligan, A.M. Kruisbeek, D.H. Margulies, E.M. Shevach, W Strober, Pub. Greene Publishing Associates and Wiley-Interscience (Chapter 3, In Vitro assays for Mouse Lymphocyte Function 3.1-3.19; Chapter 7, Immunologic studies in Humans); Takai et al., *J. Immunol.* 137:3494-3500, 1986; Bertagnolli et al., *J. Immunol.* 145:1706-1712, 1990; Bertagnolli 20 et al., *Cellular Immunology* 133:327-341, 1991; Bertagnolli, et al., *J. Immunol.* 149:3778-3783, 1992; Bowman et al., *J. Immunol.* 152: 1756-1761, 1994.

- Assays for cytokine production and/or proliferation of spleen cells, lymph node cells or thymocytes include, without limitation, those described in: Polyclonal T cell stimulation, Kruisbeek, A.M. and Shevach, E.M. In *Current Protocols in* 25 *Immunology*. J.E.e.a. Coligan eds. Vol 1 pp. 3.12.1-3.12.14, John Wiley and Sons, Toronto. 1994; and Measurement of mouse and human Interferon γ , Schreiber, R.D. In *Current Protocols in Immunology*. J.E.e.a. Coligan eds. Vol 1 pp. 6.8.1-6.8.8, John Wiley and Sons, Toronto. 1994.

- Assays for proliferation and differentiation of hematopoietic and 30 lymphopoietic cells include, without limitation, those described in: Measurement of Human and Murine Interleukin 2 and Interleukin 4, Bottomly, K., Davis, L.S. and Lipsky, P.E. In *Current Protocols in Immunology*. J.E.e.a. Coligan eds. Vol 1 pp. 6.3.1-6.3.12, John Wiley and Sons, Toronto. 1991; deVries et al., *J. Exp. Med.* 173:1205-1211, 1991; Moreau et al., *Nature* 336:690-692, 1988; Greenberger et al., *Proc.*

- Natl. Acad. Sci. U.S.A. 80:2931-2938, 1983; Measurement of mouse and human interleukin 6 - Nordan, R. In *Current Protocols in Immunology*. J.E.e.a. Coligan eds. Vol 1 pp. 6.6.1-6.6.5, John Wiley and Sons, Toronto. 1991; Smith et al., Proc. Natl. Acad. Sci. U.S.A. 83:1857-1861, 1986; Measurement of human Interleukin 11 - Bennett, F.,
- 5 Giannotti, J., Clark, S.C. and Turner, K. J. In *Current Protocols in Immunology*. J.E.e.a. Coligan eds. Vol 1 pp. 6.15.1 John Wiley and Sons, Toronto. 1991; Measurement of mouse and human Interleukin 9 - Ciarletta, A., Giannotti, J., Clark, S.C. and Turner, K.J. In *Current Protocols in Immunology*. J.E.e.a. Coligan eds. Vol 1 pp. 6.13.1, John Wiley and Sons, Toronto. 1991.
- 10 Assays for T-cell clone responses to antigens (which will identify, among others, proteins that affect APC-T cell interactions as well as direct T-cell effects by measuring proliferation and cytokine production) include, without limitation, those described in: *Current Protocols in Immunology*, Ed by J. E. Coligan, A.M. Kruisbeek, D.H. Margulies, E.M. Shevach, W Strober, Pub. Greene Publishing Associates and
- 15 Wiley-Interscience (Chapter 3, In Vitro assays for Mouse Lymphocyte Function; Chapter 6, Cytokines and their cellular receptors; Chapter 7, Immunologic studies in Humans); Weinberger et al., Proc. Natl. Acad. Sci. USA 77:6091-6095, 1980; Weinberger et al., Eur. J. Immunol. 11:405-411, 1981; Takai et al., J. Immunol. 137:3494-3500, 1986; Takai et al., J. Immunol. 140:508-512, 1988.

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Immune Stimulating or Suppressing Activity

- A protein of the present invention may also exhibit immune stimulating or immune suppressing activity, including without limitation the activities for which assays are described herein. A protein may be useful in the treatment of various
- 25 immune deficiencies and disorders (including severe combined immunodeficiency (SCID)), e.g., in regulating (up or down) growth and proliferation of T and/or B lymphocytes, as well as effecting the cytolytic activity of NK cells and other cell populations. These immune deficiencies may be genetic or be caused by viral (e.g., HIV) as well as bacterial or fungal infections, or may result from autoimmune
- 30 disorders. More specifically, infectious diseases caused by viral, bacterial, fungal or other infection may be treatable using a protein of the present invention, including infections by HIV, hepatitis viruses, herpesviruses, mycobacteria, *Leishmania* spp., *malaria* spp. and various fungal infections such as candidiasis. Of course, in this

regard, a protein of the present invention may also be useful where a boost to the immune system generally may be desirable, *i.e.*, in the treatment of cancer.

Autoimmune disorders which may be treated using a protein of the present invention include, for example, connective tissue disease, multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune pulmonary inflammation, Guillain-Barre syndrome, autoimmune thyroiditis, insulin dependent diabetes mellitis, myasthenia gravis, graft-versus-host disease and autoimmune inflammatory eye disease. Such a protein of the present invention may also to be useful in the treatment of allergic reactions and conditions, such as asthma (particularly allergic asthma) or other respiratory problems. Other conditions, in which immune suppression is desired (including, for example, organ transplantation), may also be treatable using a protein of the present invention.

Using the proteins of the invention it may also be possible to immune responses, in a number of ways. Down regulation may be in the form of inhibiting or blocking an immune response already in progress or may involve preventing the induction of an immune response. The functions of activated T cells may be inhibited by suppressing T cell responses or by inducing specific tolerance in T cells, or both. Immunosuppression of T cell responses is generally an active, non-antigen-specific, process which requires continuous exposure of the T cells to the suppressive agent. Tolerance, which involves inducing non-responsiveness or anergy in T cells, is distinguishable from immunosuppression in that it is generally antigen-specific and persists after exposure to the tolerizing agent has ceased. Operationally, tolerance can be demonstrated by the lack of a T cell response upon reexposure to specific antigen in the absence of the tolerizing agent.

Down regulating or preventing one or more antigen functions (including without limitation B lymphocyte antigen functions (such as , for example, B7)), *e.g.*, preventing high level lymphokine synthesis by activated T cells, will be useful in situations of tissue, skin and organ transplantation and in graft-versus-host disease (GVHD). For example, blockage of T cell function should result in reduced tissue destruction in tissue transplantation. Typically, in tissue transplants, rejection of the transplant is initiated through its recognition as foreign by T cells, followed by an immune reaction that destroys the transplant. The administration of a molecule which inhibits or blocks interaction of a B7 lymphocyte antigen with its natural ligand(s) on immune cells (such as a soluble, monomeric form of a peptide having

B7-2 activity alone or in conjunction with a monomeric form of a peptide having an activity of another B lymphocyte antigen (e.g., B7-1, B7-3) or blocking antibody), prior to transplantation can lead to the binding of the molecule to the natural ligand(s) on the immune cells without transmitting the corresponding costimulatory signal.

5 Blocking B lymphocyte antigen function in this matter prevents cytokine synthesis by immune cells, such as T cells, and thus acts as an immunosuppressant. Moreover, the lack of costimulation may also be sufficient to anergize the T cells, thereby inducing tolerance in a subject. Induction of long-term tolerance by B lymphocyte antigen-blocking reagents may avoid the necessity of repeated administration of

10 these blocking reagents. To achieve sufficient immunosuppression or tolerance in a subject, it may also be necessary to block the function of a combination of B lymphocyte antigens.

The efficacy of particular blocking reagents in preventing organ transplant rejection or GVHD can be assessed using animal models that are predictive of efficacy

15 in humans. Examples of appropriate systems which can be used include allogeneic cardiac grafts in rats and xenogeneic pancreatic islet cell grafts in mice, both of which have been used to examine the immunosuppressive effects of CTLA4Ig fusion proteins *in vivo* as described in Lenschow *et al.*, Science 257:789-792 (1992) and Turka *et al.*, Proc. Natl. Acad. Sci USA, 89:11102-11105 (1992). In addition, murine models

20 of GVHD (see Paul ed., Fundamental Immunology, Raven Press, New York, 1989, pp. 846-847) can be used to determine the effect of blocking B lymphocyte antigen function *in vivo* on the development of that disease.

Blocking antigen function may also be therapeutically useful for treating autoimmune diseases. Many autoimmune disorders are the result of inappropriate

25 activation of T cells that are reactive against self tissue and which promote the production of cytokines and autoantibodies involved in the pathology of the diseases. Preventing the activation of autoreactive T cells may reduce or eliminate disease symptoms. Administration of reagents which block costimulation of T cells by disrupting receptor:ligand interactions of B lymphocyte antigens can be used to

30 inhibit T cell activation and prevent production of autoantibodies or T cell-derived cytokines which may be involved in the disease process. Additionally, blocking reagents may induce antigen-specific tolerance of autoreactive T cells which could lead to long-term relief from the disease. The efficacy of blocking reagents in preventing or alleviating autoimmune disorders can be determined using a number

of well-characterized animal models of human autoimmune diseases. Examples include murine experimental autoimmune encephalitis, systemic lupus erythematosis in MRL/*lpr/lpr* mice or NZB hybrid mice, murine autoimmune collagen arthritis, diabetes mellitus in NOD mice and BB rats, and murine experimental myasthenia
5 gravis (see Paul ed., Fundamental Immunology, Raven Press, New York, 1989, pp. 840-856).

Upregulation of an antigen function (preferably a B lymphocyte antigen function), as a means of up regulating immune responses, may also be useful in therapy. Upregulation of immune responses may be in the form of enhancing an
10 existing immune response or eliciting an initial immune response. For example, enhancing an immune response through stimulating B lymphocyte antigen function may be useful in cases of viral infection. In addition, systemic viral diseases such as influenza, the common cold, and encephalitis might be alleviated by the administration of stimulatory forms of B lymphocyte antigens systemically.

15 Alternatively, anti-viral immune responses may be enhanced in an infected patient by removing T cells from the patient, costimulating the T cells *in vitro* with viral antigen-pulsed APCs either expressing a peptide of the present invention or together with a stimulatory form of a soluble peptide of the present invention and reintroducing the *in vitro* activated T cells into the patient. Another method of
20 enhancing anti-viral immune responses would be to isolate infected cells from a patient, transfect them with a nucleic acid encoding a protein of the present invention as described herein such that the cells express all or a portion of the protein on their surface, and reintroduce the transfected cells into the patient. The infected cells would now be capable of delivering a costimulatory signal to, and thereby activate,
25 T cells *in vivo*.

In another application, up regulation or enhancement of antigen function (preferably B lymphocyte antigen function) may be useful in the induction of tumor immunity. Tumor cells (*e.g.*, sarcoma, melanoma, lymphoma, leukemia, neuroblastoma, carcinoma) transfected with a nucleic acid encoding at least one
30 peptide of the present invention can be administered to a subject to overcome tumor-specific tolerance in the subject. If desired, the tumor cell can be transfected to express a combination of peptides. For example, tumor cells obtained from a patient can be transfected *ex vivo* with an expression vector directing the expression of a peptide having B7-2-like activity alone, or in conjunction with a peptide having B7-1-

like activity and/or B7-3-like activity. The transfected tumor cells are returned to the patient to result in expression of the peptides on the surface of the transfected cell. Alternatively, gene therapy techniques can be used to target a tumor cell for transfection *in vivo*.

- 5 The presence of the peptide of the present invention having the activity of a B lymphocyte antigen(s) on the surface of the tumor cell provides the necessary costimulation signal to T cells to induce a T cell mediated immune response against the transfected tumor cells. In addition, tumor cells which lack MHC class I or MHC class II molecules, or which fail to reexpress sufficient amounts of MHC class I or
- 10 MHC class II molecules, can be transfected with nucleic acid encoding all or a portion of (*e.g.*, a cytoplasmic-domain truncated portion) of an MHC class I α chain protein and β_2 microglobulin protein or an MHC class II α chain protein and an MHC class II β chain protein to thereby express MHC class I or MHC class II proteins on the cell surface. Expression of the appropriate class I or class II MHC in conjunction with a
- 15 peptide having the activity of a B lymphocyte antigen (*e.g.*, B7-1, B7-2, B7-3) induces a T cell mediated immune response against the transfected tumor cell. Optionally, a gene encoding an antisense construct which blocks expression of an MHC class II associated protein, such as the invariant chain, can also be cotransfected with a DNA encoding a peptide having the activity of a B lymphocyte antigen to promote
- 20 presentation of tumor associated antigens and induce tumor specific immunity. Thus, the induction of a T cell mediated immune response in a human subject may be sufficient to overcome tumor-specific tolerance in the subject.

The activity of a protein of the invention may, among other means, be measured by the following methods:

- 25 Suitable assays for thymocyte or splenocyte cytotoxicity include, without limitation, those described in: Current Protocols in Immunology, Ed by J. E. Coligan, A.M. Kruisbeek, D.H. Margulies, E.M. Shevach, W Strober, Pub. Greene Publishing Associates and Wiley-Interscience (Chapter 3, In Vitro assays for Mouse Lymphocyte Function 3.1-3.19; Chapter 7, Immunologic studies in Humans); Herrmann et al., Proc.
- 30 Natl. Acad. Sci. USA 78:2488-2492, 1981; Herrmann et al., J. Immunol. 128:1968-1974, 1982; Handa et al., J. Immunol. 135:1564-1572, 1985; Takai et al., J. Immunol. 137:3494-3500, 1986; Takai et al., J. Immunol. 140:508-512, 1988; Herrmann et al., Proc. Natl. Acad. Sci. USA 78:2488-2492, 1981; Herrmann et al., J. Immunol. 128:1968-1974, 1982; Handa et al., J. Immunol. 135:1564-1572, 1985; Takai et al., J.

Immunol. 137:3494-3500, 1986; Bowman et al., J. Virology 61:1992-1998; Takai et al., J. Immunol. 140:508-512, 1988; Bertagnolli et al., Cellular Immunology 133:327-341, 1991; Brown et al., J. Immunol. 153:3079-3092, 1994.

Assays for T-cell-dependent immunoglobulin responses and isotype
5 switching (which will identify, among others, proteins that modulate T-cell
dependent antibody responses and that affect Th1/Th2 profiles) include, without
limitation, those described in: Maliszewski, J. Immunol. 144:3028-3033, 1990; and
Assays for B cell function: *In vitro* antibody production, Mond, J.J. and Brunswick,
M. In *Current Protocols in Immunology*, J.E.e.a. Coligan eds. Vol 1 pp. 3.8.1-3.8.16, John
10 Wiley and Sons, Toronto. 1994.

Mixed lymphocyte reaction (MLR) assays (which will identify, among others,
proteins that generate predominantly Th1 and CTL responses) include, without
limitation, those described in: *Current Protocols in Immunology*, Ed by J. E. Coligan,
A.M. Kruisbeek, D.H. Margulies, E.M. Shevach, W Strober, Pub. Greene Publishing
15 Associates and Wiley-Interscience (Chapter 3, *In Vitro* assays for Mouse Lymphocyte
Function 3.1-3.19; Chapter 7, *Immunologic studies in Humans*); Takai et al., J.
Immunol. 137:3494-3500, 1986; Takai et al., J. Immunol. 140:508-512, 1988; Bertagnolli
et al., J. Immunol. 149:3778-3783, 1992.

Dendritic cell-dependent assays (which will identify, among others, proteins
20 expressed by dendritic cells that activate naive T-cells) include, without limitation,
those described in: Guery et al., J. Immunol. 134:536-544, 1995; Inaba et al., *Journal of*
Experimental Medicine 173:549-559, 1991; Macatonia et al., *Journal of Immunology*
154:5071-5079, 1995; Porgador et al., *Journal of Experimental Medicine* 182:255-260,
1995; Nair et al., *Journal of Virology* 67:4062-4069, 1993; Huang et al., *Science*
25 264:961-965, 1994; Macatonia et al., *Journal of Experimental Medicine* 169:1255-1264,
1989; Bhardwaj et al., *Journal of Clinical Investigation* 94:797-807, 1994; and Inaba et
al., *Journal of Experimental Medicine* 172:631-640, 1990.

Assays for lymphocyte survival/apoptosis (which will identify, among others,
proteins that prevent apoptosis after superantigen induction and proteins that
30 regulate lymphocyte homeostasis) include, without limitation, those described in:
Darzynkiewicz et al., *Cytometry* 13:795-808, 1992; Gorczyca et al., *Leukemia*
7:659-670, 1993; Gorczyca et al., *Cancer Research* 53:1945-1951, 1993; Itoh et al., *Cell*
66:233-243, 1991; Zacharchuk, *Journal of Immunology* 145:4037-4045, 1990; Zamai et

al., Cytometry 14:891-897, 1993; Gorczyca et al., International Journal of Oncology 1:639-648, 1992.

Assays for proteins that influence early steps of T-cell commitment and development include, without limitation, those described in: Antica et al., Blood 5 84:111-117, 1994; Fine et al., Cellular Immunology 155:111-122, 1994; Galy et al., Blood 85:2770-2778, 1995; Toki et al., Proc. Nat. Acad. Sci. USA 88:7548-7551, 1991.

Hematopoiesis Regulating Activity

A protein of the present invention may be useful in regulation of
10 hematopoiesis and, consequently, in the treatment of myeloid or lymphoid cell deficiencies. Even marginal biological activity in support of colony forming cells or of factor-dependent cell lines indicates involvement in regulating hematopoiesis, e.g. in supporting the growth and proliferation of erythroid progenitor cells alone or in combination with other cytokines, thereby indicating utility, for example, in treating
15 various anemias or for use in conjunction with irradiation/chemotherapy to stimulate the production of erythroid precursors and/or erythroid cells; in supporting the growth and proliferation of myeloid cells such as granulocytes and monocytes/macrophages (i.e., traditional CSF activity) useful, for example, in conjunction with chemotherapy to prevent or treat consequent myelo-suppression;
20 in supporting the growth and proliferation of megakaryocytes and consequently of platelets thereby allowing prevention or treatment of various platelet disorders such as thrombocytopenia, and generally for use in place of or complimentary to platelet transfusions; and/or in supporting the growth and proliferation of hematopoietic stem cells which are capable of maturing to any and all of the above-mentioned
25 hematopoietic cells and therefore find therapeutic utility in various stem cell disorders (such as those usually treated with transplantation, including, without limitation, aplastic anemia and paroxysmal nocturnal hemoglobinuria), as well as in repopulating the stem cell compartment post irradiation/chemotherapy, either *in-vivo* or *ex-vivo* (i.e., in conjunction with bone marrow transplantation or with peripheral
30 progenitor cell transplantation (homologous or heterologous)) as normal cells or genetically manipulated for gene therapy.

The activity of a protein of the invention may, among other means, be measured by the following methods:

Suitable assays for proliferation and differentiation of various hematopoietic lines are cited above.

Assays for embryonic stem cell differentiation (which will identify, among others, proteins that influence embryonic differentiation hematopoiesis) include, without limitation, those described in: Johansson et al. *Cellular Biology* 15:141-151, 1995; Keller et al., *Molecular and Cellular Biology* 13:473-486, 1993; McClanahan et al., *Blood* 81:2903-2915, 1993.

Assays for stem cell survival and differentiation (which will identify, among others, proteins that regulate lympho-hematopoiesis) include, without limitation, those described in: Methylcellulose colony forming assays, Freshney, M.G. In *Culture of Hematopoietic Cells*. R.I. Freshney, et al. eds. Vol pp. 265-268, Wiley-Liss, Inc., New York, NY. 1994; Hirayama et al., *Proc. Natl. Acad. Sci. USA* 89:5907-5911, 1992; Primitive hematopoietic colony forming cells with high proliferative potential, McNiece, I.K. and Briddell, R.A. In *Culture of Hematopoietic Cells*. R.I. Freshney, et al. eds. Vol pp. 23-39, Wiley-Liss, Inc., New York, NY. 1994; Neben et al., *Experimental Hematology* 22:353-359, 1994; Cobblestone area forming cell assay, Ploemacher, R.E. In *Culture of Hematopoietic Cells*. R.I. Freshney, et al. eds. Vol pp. 1-21, Wiley-Liss, Inc., New York, NY. 1994; Long term bone marrow cultures in the presence of stromal cells, Spooncer, E., Dexter, M. and Allen, T. In *Culture of Hematopoietic Cells*. R.I. Freshney, et al. eds. Vol pp. 163-179, Wiley-Liss, Inc., New York, NY. 1994; Long term culture initiating cell assay, Sutherland, H.J. In *Culture of Hematopoietic Cells*. R.I. Freshney, et al. eds. Vol pp. 139-162, Wiley-Liss, Inc., New York, NY. 1994.

Tissue Growth Activity

A protein of the present invention also may have utility in compositions used for bone, cartilage, tendon, ligament and/or nerve tissue growth or regeneration, as well as for wound healing and tissue repair and replacement, and in the treatment of burns, incisions and ulcers.

A protein of the present invention, which induces cartilage and/or bone growth in circumstances where bone is not normally formed, has application in the healing of bone fractures and cartilage damage or defects in humans and other animals. Such a preparation employing a protein of the invention may have prophylactic use in closed as well as open fracture reduction and also in the improved fixation of artificial joints. *De novo* bone formation induced by an

osteogenic agent contributes to the repair of congenital, trauma induced, or oncologic resection induced craniofacial defects, and also is useful in cosmetic plastic surgery.

A protein of this invention may also be used in the treatment of periodontal disease, and in other tooth repair processes. Such agents may provide an environment to attract bone-forming cells, stimulate growth of bone-forming cells or induce differentiation of progenitors of bone-forming cells. A protein of the invention may also be useful in the treatment of osteoporosis or osteoarthritis, such as through stimulation of bone and/or cartilage repair or by blocking inflammation or processes of tissue destruction (collagenase activity, osteoclast activity, etc.) mediated by inflammatory processes.

Another category of tissue regeneration activity that may be attributable to the protein of the present invention is tendon/ligament formation. A protein of the present invention, which induces tendon/ligament-like tissue or other tissue formation in circumstances where such tissue is not normally formed, has application in the healing of tendon or ligament tears, deformities and other tendon or ligament defects in humans and other animals. Such a preparation employing a tendon/ligament-like tissue inducing protein may have prophylactic use in preventing damage to tendon or ligament tissue, as well as use in the improved fixation of tendon or ligament to bone or other tissues, and in repairing defects to tendon or ligament tissue. De novo tendon/ligament-like tissue formation induced by a composition of the present invention contributes to the repair of congenital, trauma induced, or other tendon or ligament defects of other origin, and is also useful in cosmetic plastic surgery for attachment or repair of tendons or ligaments. The compositions of the present invention may provide an environment to attract tendon- or ligament-forming cells, stimulate growth of tendon- or ligament-forming cells, induce differentiation of progenitors of tendon- or ligament-forming cells, or induce growth of tendon/ligament cells or progenitors *ex vivo* for return *in vivo* to effect tissue repair. The compositions of the invention may also be useful in the treatment of tendinitis, carpal tunnel syndrome and other tendon or ligament defects. The compositions may also include an appropriate matrix and/or sequestering agent as a carrier as is well known in the art.

The protein of the present invention may also be useful for proliferation of neural cells and for regeneration of nerve and brain tissue, *i.e.* for the treatment of central and peripheral nervous system diseases and neuropathies, as well as

mechanical and traumatic disorders, which involve degeneration, death or trauma to neural cells or nerve tissue. More specifically, a protein may be used in the treatment of diseases of the peripheral nervous system, such as peripheral nerve injuries, peripheral neuropathy and localized neuropathies, and central nervous
5 system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager syndrome. Further conditions which may be treated in accordance with the present invention include mechanical and traumatic disorders, such as spinal cord disorders, head trauma and cerebrovascular diseases such as stroke. Peripheral neuropathies resulting from chemotherapy or
10 other medical therapies may also be treatable using a protein of the invention.

Proteins of the invention may also be useful to promote better or faster closure of non-healing wounds, including without limitation pressure ulcers, ulcers associated with vascular insufficiency, surgical and traumatic wounds, and the like.

It is expected that a protein of the present invention may also exhibit activity
15 for generation or regeneration of other tissues, such as organs (including, for example, pancreas, liver, intestine, kidney, skin, endothelium), muscle (smooth, skeletal or cardiac) and vascular (including vascular endothelium) tissue, or for promoting the growth of cells comprising such tissues. Part of the desired effects may be by inhibition or modulation of fibrotic scarring to allow normal tissue to
20 regenerate. A protein of the invention may also exhibit angiogenic activity.

A protein of the present invention may also be useful for gut protection or regeneration and treatment of lung or liver fibrosis, reperfusion injury in various tissues, and conditions resulting from systemic cytokine damage.

A protein of the present invention may also be useful for promoting or
25 inhibiting differentiation of tissues described above from precursor tissues or cells; or for inhibiting the growth of tissues described above.

The activity of a protein of the invention may, among other means, be measured by the following methods:

Assays for tissue generation activity include, without limitation, those
30 described in: International Patent Publication No. WO95/16035 (bone, cartilage, tendon); International Patent Publication No. WO95/05846 (nerve, neuronal); International Patent Publication No. WO91/07491 (skin, endothelium).

Assays for wound healing activity include, without limitation, those described in: Winter, Epidermal Wound Healing, pps. 71-112 (Maibach, HI and Rovee, DT,

eds.), Year Book Medical Publishers, Inc., Chicago, as modified by Eaglstein and Mertz, J. Invest. Dermatol 71:382-84 (1978).

Activin/Inhibin Activity

5 A protein of the present invention may also exhibit activin- or inhibin-related activities. Inhibins are characterized by their ability to inhibit the release of follicle stimulating hormone (FSH), while activins are characterized by their ability to stimulate the release of follicle stimulating hormone (FSH). Thus, a protein of the present invention, alone or in heterodimers with a member of the inhibin α family, 10 may be useful as a contraceptive based on the ability of inhibins to decrease fertility in female mammals and decrease spermatogenesis in male mammals. Administration of sufficient amounts of other inhibins can induce infertility in these mammals. Alternatively, the protein of the invention, as a homodimer or as a heterodimer with other protein subunits of the inhibin- β group, may be useful as a 15 fertility inducing therapeutic, based upon the ability of activin molecules in stimulating FSH release from cells of the anterior pituitary. See, for example, United States Patent 4,798,885. A protein of the invention may also be useful for advancement of the onset of fertility in sexually immature mammals, so as to increase the lifetime reproductive performance of domestic animals such as cows, sheep and 20 pigs.

The activity of a protein of the invention may, among other means, be measured by the following methods:

Assays for activin/inhibin activity include, without limitation, those described in: Vale et al., Endocrinology 91:562-572, 1972; Ling et al., Nature 321:779-782, 1986; 25 Vale et al., Nature 321:776-779, 1986; Mason et al., Nature 318:659-663, 1985; Forage et al., Proc. Natl. Acad. Sci. USA 83:3091-3095, 1986.

Chemotactic/Chemokinetic Activity

A protein of the present invention may have chemotactic or chemokinetic 30 activity (e.g., act as a chemokine) for mammalian cells, including, for example, monocytes, fibroblasts, neutrophils, T-cells, mast cells, eosinophils, epithelial and/or endothelial cells. Chemotactic and chemokinetic proteins can be used to mobilize or attract a desired cell population to a desired site of action. Chemotactic or chemokinetic proteins provide particular advantages in treatment of wounds and

other trauma to tissues, as well as in treatment of localized infections. For example, attraction of lymphocytes, monocytes or neutrophils to tumors or sites of infection may result in improved immune responses against the tumor or infecting agent.

5 A protein or peptide has chemotactic activity for a particular cell population if it can stimulate, directly or indirectly, the directed orientation or movement of such cell population. Preferably, the protein or peptide has the ability to directly stimulate directed movement of cells. Whether a particular protein has chemotactic activity for a population of cells can be readily determined by employing such protein or peptide in any known assay for cell chemotaxis.

10 The activity of a protein of the invention may, among other means, be measured by the following methods:

Assays for chemotactic activity (which will identify proteins that induce or prevent chemotaxis) consist of assays that measure the ability of a protein to induce the migration of cells across a membrane as well as the ability of a protein to induce
15 the adhesion of one cell population to another cell population. Suitable assays for movement and adhesion include, without limitation, those described in: Current Protocols in Immunology, Ed by J.E. Coligan, A.M. Kruisbeek, D.H. Margulies, E.M. Shevach, W.Strober, Pub. Greene Publishing Associates and Wiley-Interscience (Chapter 6.12, Measurement of alpha and beta Chemokines 6.12.1-6.12.28; Taub et al.
20 J. Clin. Invest. 95:1370-1376, 1995; Lind et al. APMIS 103:140-146, 1995; Muller et al Eur. J. Immunol. 25: 1744-1748; Gruber et al. J. of Immunol. 152:5860-5867, 1994; Johnston et al. J. of Immunol. 153: 1762-1768, 1994.

Hemostatic and Thrombolytic Activity

25 A protein of the invention may also exhibit hemostatic or thrombolytic activity. As a result, such a protein is expected to be useful in treatment of various coagulation disorders (including hereditary disorders, such as hemophilias) or to enhance coagulation and other hemostatic events in treating wounds resulting from trauma, surgery or other causes. A protein of the invention may also be useful for
30 dissolving or inhibiting formation of thromboses and for treatment and prevention of conditions resulting therefrom (such as, for example, infarction of cardiac and central nervous system vessels (e.g., stroke).

The activity of a protein of the invention may, among other means, be measured by the following methods:

Assay for hemostatic and thrombolytic activity include, without limitation, those described in: Linet et al., J. Clin. Pharmacol. 26:131-140, 1986; Burdick et al., Thrombosis Res. 45:413-419, 1987; Humphrey et al., Fibrinolysis 5:71-79 (1991); Schaub, Prostaglandins 35:467-474, 1988.

5

Receptor/Ligand Activity

A protein of the present invention may also demonstrate activity as receptors, receptor ligands or inhibitors or agonists of receptor/ligand interactions. Examples of such receptors and ligands include, without limitation, cytokine receptors and their
10 ligands, receptor kinases and their ligands, receptor phosphatases and their ligands, receptors involved in cell-cell interactions and their ligands (including without limitation, cellular adhesion molecules (such as selectins, integrins and their ligands) and receptor/ligand pairs involved in antigen presentation, antigen recognition and development of cellular and humoral immune responses). Receptors and ligands are
15 also useful for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interaction. A protein of the present invention (including, without limitation, fragments of receptors and ligands) may themselves be useful as inhibitors of receptor/ligand interactions.

The activity of a protein of the invention may, among other means, be
20 measured by the following methods:

Suitable assays for receptor-ligand activity include without limitation those described in: Current Protocols in Immunology, Ed by J.E. Coligan, A.M. Kruisbeek, D.H. Margulies, E.M. Shevach, W. Strober, Pub. Greene Publishing Associates and Wiley-Interscience (Chapter 7.28, Measurement of Cellular Adhesion under static
25 conditions 7.28.1-7.28.22), Takai et al., Proc. Natl. Acad. Sci. USA 84:6864-6868, 1987; Bierer et al., J. Exp. Med. 168:1145-1156, 1988; Rosenstein et al., J. Exp. Med. 169:149-160 1989; Stoltenborg et al., J. Immunol. Methods 175:59-68, 1994; Stitt et al., Cell 80:661-670, 1995.

Anti-Inflammatory Activity

30 Proteins of the present invention may also exhibit anti-inflammatory activity. The anti-inflammatory activity may be achieved by providing a stimulus to cells involved in the inflammatory response, by inhibiting or promoting cell-cell interactions (such as, for example, cell adhesion), by inhibiting or promoting

chemotaxis of cells involved in the inflammatory process, inhibiting or promoting cell extravasation, or by stimulating or suppressing production of other factors which more directly inhibit or promote an inflammatory response. Proteins exhibiting such activities can be used to treat inflammatory conditions including chronic or acute
5 conditions), including without limitation inflammation associated with infection (such as septic shock, sepsis or systemic inflammatory response syndrome (SIRS)), ischemia-reperfusion injury, endotoxin lethality, arthritis, complement-mediated hyperacute rejection, nephritis, cytokine or chemokine-induced lung injury, inflammatory bowel disease, Crohn's disease or resulting from over production of
10 cytokines such as TNF or IL-1. Proteins of the invention may also be useful to treat anaphylaxis and hypersensitivity to an antigenic substance or material.

Tumor Inhibition Activity

In addition to the activities described above for immunological treatment or
15 prevention of tumors, a protein of the invention may exhibit other anti-tumor activities. A protein may inhibit tumor growth directly or indirectly (such as, for example, via ADCC). A protein may exhibit its tumor inhibitory activity by acting on tumor tissue or tumor precursor tissue, by inhibiting formation of tissues necessary to support tumor growth (such as, for example, by inhibiting angiogenesis),
20 by causing production of other factors, agents or cell types which inhibit tumor growth, or by suppressing, eliminating or inhibiting factors, agents or cell types which promote tumor growth.

Other Activities

A protein of the invention may also exhibit one or more of the following additional activities or effects: inhibiting the growth, infection or function of, or killing, infectious agents, including, without limitation, bacteria, viruses, fungi and other parasites; effecting (suppressing or enhancing) bodily characteristics, including,
30 without limitation, height, weight, hair color, eye color, skin, fat to lean ratio or other tissue pigmentation, or organ or body part size or shape (such as, for example, breast augmentation or diminution, change in bone form or shape); effecting biorhythms or circadian cycles or rhythms; effecting the fertility of male or female subjects; effecting the metabolism, catabolism, anabolism, processing, utilization, storage or elimination

of dietary fat, lipid, protein, carbohydrate, vitamins, minerals, cofactors or other nutritional factors or component(s); effecting behavioral characteristics, including, without limitation, appetite, libido, stress, cognition (including cognitive disorders), depression (including depressive disorders) and violent behaviors; providing
5 analgesic effects or other pain reducing effects; promoting differentiation and growth of embryonic stem cells in lineages other than hematopoietic lineages; hormonal or endocrine activity; in the case of enzymes, correcting deficiencies of the enzyme and treating deficiency-related diseases; treatment of hyperproliferative disorders (such as, for example, psoriasis); immunoglobulin-like activity (such as, for example, the
10 ability to bind antigens or complement); and the ability to act as an antigen in a vaccine composition to raise an immune response against such protein or another material or entity which is cross-reactive with such protein.

15

ADMINISTRATION AND DOSING

A protein of the present invention (from whatever source derived, including without limitation from recombinant and non-recombinant sources) may be used in a pharmaceutical composition when combined with a pharmaceutically acceptable carrier. Such a composition may also contain (in addition to protein and a carrier) diluents, fillers, salts, buffers, stabilizers, solubilizers, and other materials well known in the art. The term "pharmaceutically acceptable" means a non-toxic material that does not interfere with the effectiveness of the biological activity of the active ingredient(s). The characteristics of the carrier will depend on the route of administration. The pharmaceutical composition of the invention may also contain cytokines, lymphokines, or other hematopoietic factors such as M-CSF, GM-CSF, TNF, IL-1, IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, IL-13, IL-14, IL-15, IFN, TNF0, TNF1, TNF2, G-CSF, Meg-CSF, thrombopoietin, stem cell factor, and erythropoietin. The pharmaceutical composition may further contain other agents which either enhance the activity of the protein or compliment its activity or use in treatment. Such additional factors and/or agents may be included in the pharmaceutical composition to produce a synergistic effect with protein of the invention, or to minimize side effects. Conversely, protein of the present invention may be included in formulations of the particular cytokine, lymphokine, other hematopoietic factor, thrombolytic or anti-thrombotic factor, or anti-inflammatory agent to minimize side effects of the cytokine, lymphokine, other hematopoietic factor, thrombolytic or anti-thrombotic factor, or anti-inflammatory agent.

A protein of the present invention may be active in multimers (e.g., heterodimers or homodimers) or complexes with itself or other proteins. As a result, pharmaceutical compositions of the invention may comprise a protein of the invention in such multimeric or complexed form.

The pharmaceutical composition of the invention may be in the form of a complex of the protein(s) of present invention along with protein or peptide antigens. The protein and/or peptide antigen will deliver a stimulatory signal to both B and T lymphocytes. B lymphocytes will respond to antigen through their surface immunoglobulin receptor. T lymphocytes will respond to antigen through the T cell receptor (TCR) following presentation of the antigen by MHC proteins. MHC and structurally related proteins including those encoded by class I and class II MHC genes on host cells will serve to present the peptide antigen(s) to T lymphocytes. The

antigen components could also be supplied as purified MHC-peptide complexes alone or with co-stimulatory molecules that can directly signal T cells. Alternatively antibodies able to bind surface immunoglobulin and other molecules on B cells as well as antibodies able to bind the TCR and other molecules on T cells can be
5 combined with the pharmaceutical composition of the invention.

The pharmaceutical composition of the invention may be in the form of a liposome in which protein of the present invention is combined, in addition to other pharmaceutically acceptable carriers, with amphipathic agents such as lipids which exist in aggregated form as micelles, insoluble monolayers, liquid crystals, or lamellar
10 layers in aqueous solution. Suitable lipids for liposomal formulation include, without limitation, monoglycerides, diglycerides, sulfatides, lysolecithin, phospholipids, saponin, bile acids, and the like. Preparation of such liposomal formulations is within the level of skill in the art, as disclosed, for example, in U.S. Patent No. 4,235,871; U.S. Patent No. 4,501,728; U.S. Patent No. 4,837,028; and U.S. Patent No. 4,737,323, all of
15 which are incorporated herein by reference.

As used herein, the term "therapeutically effective amount" means the total amount of each active component of the pharmaceutical composition or method that is sufficient to show a meaningful patient benefit, i.e., treatment, healing, prevention or amelioration of the relevant medical condition, or an increase in rate of treatment,
20 healing, prevention or amelioration of such conditions. When applied to an individual active ingredient, administered alone, the term refers to that ingredient alone. When applied to a combination, the term refers to combined amounts of the active ingredients that result in the therapeutic effect, whether administered in combination, serially or simultaneously.

25 In practicing the method of treatment or use of the present invention, a therapeutically effective amount of protein of the present invention is administered to a mammal having a condition to be treated. Protein of the present invention may be administered in accordance with the method of the invention either alone or in combination with other therapies such as treatments employing cytokines,
30 lymphokines or other hematopoietic factors. When co-administered with one or more cytokines, lymphokines or other hematopoietic factors, protein of the present invention may be administered either simultaneously with the cytokine(s), lymphokine(s), other hematopoietic factor(s), thrombolytic or anti-thrombotic factors, or sequentially. If administered sequentially, the attending physician will decide on

the appropriate sequence of administering protein of the present invention in combination with cytokine(s), lymphokine(s), other hematopoietic factor(s), thrombolytic or anti-thrombotic factors.

Administration of protein of the present invention used in the pharmaceutical composition or to practice the method of the present invention can be carried out in a variety of conventional ways, such as oral ingestion, inhalation, topical application or cutaneous, subcutaneous, intraperitoneal, parenteral or intravenous injection. Intravenous administration to the patient is preferred.

When a therapeutically effective amount of protein of the present invention is administered orally, protein of the present invention will be in the form of a tablet, capsule, powder, solution or elixir. When administered in tablet form, the pharmaceutical composition of the invention may additionally contain a solid carrier such as a gelatin or an adjuvant. The tablet, capsule, and powder contain from about 5 to 95% protein of the present invention, and preferably from about 25 to 90% protein of the present invention. When administered in liquid form, a liquid carrier such as water, petroleum, oils of animal or plant origin such as peanut oil, mineral oil, soybean oil, or sesame oil, or synthetic oils may be added. The liquid form of the pharmaceutical composition may further contain physiological saline solution, dextrose or other saccharide solution, or glycols such as ethylene glycol, propylene glycol or polyethylene glycol. When administered in liquid form, the pharmaceutical composition contains from about 0.5 to 90% by weight of protein of the present invention, and preferably from about 1 to 50% protein of the present invention.

When a therapeutically effective amount of protein of the present invention is administered by intravenous, cutaneous or subcutaneous injection, protein of the present invention will be in the form of a pyrogen-free, parenterally acceptable aqueous solution. The preparation of such parenterally acceptable protein solutions, having due regard to pH, isotonicity, stability, and the like, is within the skill in the art. A preferred pharmaceutical composition for intravenous, cutaneous, or subcutaneous injection should contain, in addition to protein of the present invention, an isotonic vehicle such as Sodium Chloride Injection, Ringer's Injection, Dextrose Injection, Dextrose and Sodium Chloride Injection, Lactated Ringer's Injection, or other vehicle as known in the art. The pharmaceutical composition of the present invention may also contain stabilizers, preservatives, buffers, antioxidants, or other additives known to those of skill in the art.

The amount of protein of the present invention in the pharmaceutical composition of the present invention will depend upon the nature and severity of the condition being treated, and on the nature of prior treatments which the patient has undergone. Ultimately, the attending physician will decide the amount of protein of the present invention with which to treat each individual patient. Initially, the attending physician will administer low doses of protein of the present invention and observe the patient's response. Larger doses of protein of the present invention may be administered until the optimal therapeutic effect is obtained for the patient, and at that point the dosage is not increased further. It is contemplated that the various pharmaceutical compositions used to practice the method of the present invention should contain about 0.01 μ g to about 100 mg (preferably about 0.1ng to about 10 mg, more preferably about 0.1 μ g to about 1 mg) of protein of the present invention per kg body weight.

The duration of intravenous therapy using the pharmaceutical composition of the present invention will vary, depending on the severity of the disease being treated and the condition and potential idiosyncratic response of each individual patient. It is contemplated that the duration of each application of the protein of the present invention will be in the range of 12 to 24 hours of continuous intravenous administration. Ultimately the attending physician will decide on the appropriate duration of intravenous therapy using the pharmaceutical composition of the present invention.

Protein of the invention may also be used to immunize animals to obtain polyclonal and monoclonal antibodies which specifically react with the protein. Such antibodies may be obtained using either the entire protein or fragments thereof as an immunogen. The peptide immunogens additionally may contain a cysteine residue at the carboxyl terminus, and are conjugated to a hapten such as keyhole limpet hemocyanin (KLH). Methods for synthesizing such peptides are known in the art, for example, as in R.P. Merrifield, J. Amer.Chem.Soc. 85, 2149-2154 (1963); J.L. Krstenansky, *et al.*, FEBS Lett. 211, 10 (1987). Monoclonal antibodies binding to the protein of the invention may be useful diagnostic agents for the immunodetection of the protein. Neutralizing monoclonal antibodies binding to the protein may also be useful therapeutics for both conditions associated with the protein and also in the treatment of some forms of cancer where abnormal expression of the protein is involved. In the case of cancerous cells or leukemic cells, neutralizing monoclonal

antibodies against the protein may be useful in detecting and preventing the metastatic spread of the cancerous cells, which may be mediated by the protein.

For compositions of the present invention which are useful for bone, cartilage, tendon or ligament regeneration, the therapeutic method includes administering the composition topically, systematically, or locally as an implant or device. When administered, the therapeutic composition for use in this invention is, of course, in a pyrogen-free, physiologically acceptable form. Further, the composition may desirably be encapsulated or injected in a viscous form for delivery to the site of bone, cartilage or tissue damage. Topical administration may be suitable for wound healing and tissue repair. Therapeutically useful agents other than a protein of the invention which may also optionally be included in the composition as described above, may alternatively or additionally, be administered simultaneously or sequentially with the composition in the methods of the invention. Preferably for bone and/or cartilage formation, the composition would include a matrix capable of delivering the protein-containing composition to the site of bone and/or cartilage damage, providing a structure for the developing bone and cartilage and optimally capable of being resorbed into the body. Such matrices may be formed of materials presently in use for other implanted medical applications.

The choice of matrix material is based on biocompatibility, biodegradability, mechanical properties, cosmetic appearance and interface properties. The particular application of the compositions will define the appropriate formulation. Potential matrices for the compositions may be biodegradable and chemically defined calcium sulfate, tricalciumphosphate, hydroxyapatite, polylactic acid, polyglycolic acid and polyanhydrides. Other potential materials are biodegradable and biologically well-defined, such as bone or dermal collagen. Further matrices are comprised of pure proteins or extracellular matrix components. Other potential matrices are nonbiodegradable and chemically defined, such as sintered hydroxapatite, bioglass, aluminates, or other ceramics. Matrices may be comprised of combinations of any of the above mentioned types of material, such as polylactic acid and hydroxyapatite or collagen and tricalciumphosphate. The bioceramics may be altered in composition, such as in calcium-aluminate-phosphate and processing to alter pore size, particle size, particle shape, and biodegradability.

Presently preferred is a 50:50 (mole weight) copolymer of lactic acid and glycolic acid in the form of porous particles having diameters ranging from 150 to 800

microns. In some applications, it will be useful to utilize a sequestering agent, such as carboxymethyl cellulose or autologous blood clot, to prevent the protein compositions from disassociating from the matrix.

A preferred family of sequestering agents is cellulosic materials such as alkylcelluloses (including hydroxyalkylcelluloses), including methylcellulose, ethylcellulose, hydroxyethylcellulose, hydroxypropylcellulose, hydroxypropylmethylcellulose, and carboxymethylcellulose, the most preferred being cationic salts of carboxymethylcellulose (CMC). Other preferred sequestering agents include hyaluronic acid, sodium alginate, poly(ethylene glycol), polyoxyethylene oxide, carboxyvinyl polymer and poly(vinyl alcohol). The amount of sequestering agent useful herein is 0.5-20 wt%, preferably 1-10 wt% based on total formulation weight, which represents the amount necessary to prevent desorption of the protein from the polymer matrix and to provide appropriate handling of the composition, yet not so much that the progenitor cells are prevented from infiltrating the matrix, thereby providing the protein the opportunity to assist the osteogenic activity of the progenitor cells.

In further compositions, proteins of the invention may be combined with other agents beneficial to the treatment of the bone and/or cartilage defect, wound, or tissue in question. These agents include various growth factors such as epidermal growth factor (EGF), platelet derived growth factor (PDGF), transforming growth factors (TGF- α and TGF- β), and insulin-like growth factor (IGF).

The therapeutic compositions are also presently valuable for veterinary applications. Particularly domestic animals and thoroughbred horses, in addition to humans, are desired patients for such treatment with proteins of the present invention.

The dosage regimen of a protein-containing pharmaceutical composition to be used in tissue regeneration will be determined by the attending physician considering various factors which modify the action of the proteins, e.g., amount of tissue weight desired to be formed, the site of damage, the condition of the damaged tissue, the size of a wound, type of damaged tissue (e.g., bone), the patient's age, sex, and diet, the severity of any infection, time of administration and other clinical factors. The dosage may vary with the type of matrix used in the reconstitution and with inclusion of other proteins in the pharmaceutical composition. For example, the addition of other known growth factors, such as IGF I (insulin like growth factor I),

to the final composition, may also effect the dosage. Progress can be monitored by periodic assessment of tissue/bone growth and/or repair, for example, X-rays, histomorphometric determinations and tetracycline labeling.

Polynucleotides of the present invention can also be used for gene therapy.

- 5 Such polynucleotides can be introduced either *in vivo* or *ex vivo* into cells for expression in a mammalian subject. Polynucleotides of the invention may also be administered by other known methods for introduction of nucleic acid into a cell or organism (including, without limitation, in the form of viral vectors or naked DNA).

- 10 Cells may also be cultured *ex vivo* in the presence of proteins of the present invention in order to proliferate or to produce a desired effect on or activity in such cells. Treated cells can then be introduced *in vivo* for therapeutic purposes.

Patent and literature references cited herein are incorporated by reference as if fully set forth.

TABLE 3

<u>Sel.</u>	<u>Species</u>	<u>Stage</u>	<u>Tissue</u>	<u>Cell Type</u>	<u>Treatment</u>
PP	Human	Adult	Blood	LymphoblasticLeukemiaMOLT-4	None
PQ	Human	Adult	Tumor	ColorectalAdenocarcinomaSW480	None
PR	Human	Fetal	Kidney	N/A	None
PS	Human	Fetal	Kidney	N/A	None
PT	Human	Adult	Blood	LymphoblasticLeukemiaMOLT-4	None
PU	Human	Adult	Blood	Promyelocytic Leukemia HL-60	None
PV	Human	Adult	Brain	Cerebellum	None
PW	Human	Adult	Brain	Cerebellum	None
PX	Human	Adult	Brain	Cerebellum	None
PY	Human	Adult	Brain	Cerebellum	None
PZ	Human	Adult	Bone Marrow	N/A	None
Q	Mouse	Adult	Bone Marrow	N/A	5 fluoro-uracil
QA	Human	Adult	Cartilage	Chondrosarcoma HTB-94 line	None
QB	Human	Adult	Bladder	Carcinoma 5637	None
QC	Human	Adult	Neural	Neuroepithelioma HTB-10 line	None
QD	Human	Fetal	Embryo	FHs173 We HTB-158	None
QE	Human	Fetal	Liver	N/A	None
QF	Human	Adult	Bladder	Carcinoma 5637	None
QG	Human	Adult	Neural	Neuroepithelioma HTB-10 line	None
QH	Human	Fetal	Embryo	FHs173 We HTB-158	None
QL	Human	Fetal	Heart	18 weeks gestation	None
QM	Human	Adult	Blood	Histiocytic lymphoma U937	None
QN	Human	Adult	Cartilage	Chondrosarcoma HTB-94 line	None
QO	Human	Adult	Brain	Corpus Callosum	None
QR	Human	Adult	Brain	Subthalamic Nucleus	None
QS	Human	Fetal	Whole Embryo	N/A	None
QT	Human	Fetal	Kidney	N/A	None
QU	Human	Adult	Blood	ChronicMyelogenousLeukemiaK562	None
QV	Human	Adult	Testis	Embryonal Carcinoma NT2D1	RA for 23 days
QX	Human	Adult	Bone	Ewing's Sarcoma RD-ES	None
QY	Human	Adult	Blood	Promyelocytic Leukemia HL-60	None
QZ	Human	Adult	Brain	Caudate Nucleus	None
RA	Human	Adult	Brain	Substantia Nigra	None
RB	Human	Adult	Kidney	293 embryonal carcinoma line	None

RC	Human	Adult	Kidney	293 embryonal carcinoma line	None
RD	Human	Adult	Kidney	293 embryonal carcinoma line	None
RE	Human	Adult	Brain	Amygdala	None
RF	Human	Adult	Bone Marrow	N/A	None
RG	Human	Adult	Blood	Promyelocytic Leukemia HL-60	None
RH	Human	Adult	Blood	Promyelocytic Leukemia HL-60	None
RI	Human	Adult	Brain	Subthalamic Nucleus	None
RJ	Human	Adult	Neural	Neuroepithelioma HTB-10 line	None
RK	Human	Adult	Tumor	Colorectal Adenocarcinoma SW480	None
RL	Human	Fetal	Kidney	293 cell line	None
RM	Human	N/A	Brain	Neuroectodermal Tumor CRL-2060	None
RN	Human	Adult	Blood	Lymphoblastic Leukemia MOLT-4	None
RP	Human	Adult	Brain	Thalamus	None
RQ	Human	Fetal	Kidney	N/A	None
RR	Human	Fetal	Kidney	N/A	None
RS	Human	Adult	Tumor	Colorectal Adenocarcinoma SW480	None
RT	Human	N/A	Brain	Neuroectodermal Tumor CRL-2060	None
RU	Human	Adult	Adrenal corte	Carcinoma SW-13	None
RV	Human	Adult	Brain	Cerebellum	None
RW	Human	N/A	Brain	Neuroectodermal Tumor CRL-2060	None
RX	Human	N/A	Nasal Epithel	squamous cell carcinoma CCL-30	None
RY	Human	Adult	Ovary	Ovarian Adenocarcinoma HTB-161	None
RZ	Human	Adult	Brain	Cerebellum	None
S	Human	Adult	Neural	Glioblastoma line TG-1	N/A
SA	Human	Fetal	Heart	18 weeks gestation	None
SB	Human	Fetal	Whole Embryo	N/A	None
SC	Human	Fetal	Kidney	293 cell line	None
SD	Human	Fetal	Kidney	N/A	None
SE	Human	Fetal	Kidney	N/A	None
SF	Human	Adult	Bladder	Carcinoma 5637	None
SG	Human	Fetal	Heart	18 weeks gestation	None
T	Mouse	Fetal	Brain	N/A	None
V	Mouse	Fetal	Brain	N/A	None
WA	Xenopus	Fetal	Embryo	Dorsal Mesoderm	None
WC	Xenopus	11-12	Embryo	Fetal Vent. Mesoderm/Ectoderm	N/A
WF	Xenopus	Fetal	Embryo	Dorsal Mesoderm	None
WG	Xenopus	Fetal	Embryo	Dorsal Mesoderm	None

WH	Xenopus	Fetal	Embryo	Dorsal Mesoderm	None
WI	Xenopus	Fetal	Embryo	Dorsal Mesoderm	None
WJ	Xenopus	11-12	Embryo	Fetal Vent. Mesoderm/Ectoderm	N/A
WK	Xenopus	11-12	Embryo	Fetal Vent. Mesoderm/Ectoderm	N/A
WL	Xenopus	Fetal	Embryo	Dorsal Mesoderm	None
Z	Rat	Fetal	Pancreas	N/A	None

Table 3 Cell Type and Treatment Key:

RA: retinoic acid

What is claimed is:

1. An isolated polynucleotide comprising a nucleotide sequence selected from the group consisting of:

SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73, SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77, SEQ ID NO:78, SEQ ID NO:79, SEQ ID NO:80, SEQ ID NO:81, SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:85, SEQ ID NO:86, SEQ ID NO:87, SEQ ID NO:88, SEQ ID NO:89, SEQ ID NO:90, SEQ ID NO:91, SEQ ID NO:92, SEQ ID NO:93, SEQ ID NO:94, SEQ ID NO:95, SEQ ID NO:96, SEQ ID NO:97, SEQ ID NO:98, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:101, SEQ ID NO:102, SEQ ID NO:103, SEQ ID NO:104, SEQ ID NO:105, SEQ ID NO:106, SEQ ID NO:107, SEQ ID NO:108, SEQ ID NO:109, SEQ ID NO:110, SEQ ID NO:111, SEQ ID NO:112, SEQ ID NO:113, SEQ ID NO:114, SEQ ID NO:115, SEQ ID NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123, SEQ ID NO:124, SEQ ID NO:125, SEQ ID NO:126, SEQ ID NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130, SEQ ID NO:131, SEQ ID NO:132, SEQ ID NO:133, SEQ ID NO:134, SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:137, SEQ ID NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145, SEQ ID NO:146, SEQ ID NO:147, SEQ ID

NO:148, SEQ ID NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ ID NO:153, SEQ ID NO:154, SEQ ID NO:155, SEQ ID NO:156, SEQ ID NO:157, SEQ ID NO:158, SEQ ID NO:159, SEQ ID NO:160, SEQ ID NO:161, SEQ ID NO:162, SEQ ID NO:163, SEQ ID NO:164, SEQ ID NO:165, SEQ ID NO:166, SEQ ID NO:167, SEQ ID NO:168, SEQ ID NO:169, SEQ ID NO:170, SEQ ID NO:171, SEQ ID NO:172, SEQ ID NO:173, SEQ ID NO:174, SEQ ID NO:175, SEQ ID NO:176, SEQ ID NO:177, SEQ ID NO:178, SEQ ID NO:179, SEQ ID NO:180, SEQ ID NO:181, SEQ ID NO:182, SEQ ID NO:183, SEQ ID NO:184, SEQ ID NO:185, SEQ ID NO:186, SEQ ID NO:187, SEQ ID NO:188, SEQ ID NO:189, SEQ ID NO:190, SEQ ID NO:191, SEQ ID NO:192, SEQ ID NO:193, SEQ ID NO:194, SEQ ID NO:195, SEQ ID NO:196, SEQ ID NO:197, SEQ ID NO:198, SEQ ID NO:199, SEQ ID NO:200, SEQ ID NO:201, SEQ ID NO:202, SEQ ID NO:203, SEQ ID NO:204, SEQ ID NO:205, SEQ ID NO:206, SEQ ID NO:207, SEQ ID NO:208, SEQ ID NO:209, SEQ ID NO:210, SEQ ID NO:211, SEQ ID NO:212, SEQ ID NO:213, SEQ ID NO:214, SEQ ID NO:215, SEQ ID NO:216, SEQ ID NO:217, SEQ ID NO:218, SEQ ID NO:219, SEQ ID NO:220, SEQ ID NO:221, SEQ ID NO:222, SEQ ID NO:223, SEQ ID NO:224, SEQ ID NO:225, SEQ ID NO:226, SEQ ID NO:227, SEQ ID NO:228, SEQ ID NO:229, SEQ ID NO:230, SEQ ID NO:231, SEQ ID NO:232, SEQ ID NO:233, SEQ ID NO:234, SEQ ID NO:235, SEQ ID NO:236, SEQ ID NO:237, SEQ ID NO:238, SEQ ID NO:239, SEQ ID NO:240, SEQ ID NO:241, SEQ ID NO:242, SEQ ID NO:243, SEQ ID NO:244, SEQ ID NO:245, SEQ ID NO:246, SEQ ID NO:247, SEQ ID NO:248, SEQ ID NO:249, SEQ ID NO:250, SEQ ID NO:251, SEQ ID NO:252, SEQ ID NO:253, SEQ ID NO:254, SEQ ID NO:255, SEQ ID NO:256, SEQ ID NO:257, SEQ ID NO:258, SEQ ID NO:259, SEQ ID NO:260, SEQ ID NO:261, SEQ ID NO:262, SEQ ID NO:263, SEQ ID NO:264, SEQ ID NO:265, SEQ ID NO:266, SEQ ID NO:267, SEQ ID NO:268, SEQ ID NO:269, SEQ ID NO:270, SEQ ID NO:271, SEQ ID NO:272, SEQ ID NO:273, SEQ ID NO:274, SEQ ID NO:275, SEQ ID NO:276, SEQ ID NO:277, SEQ ID NO:278, SEQ ID NO:279, SEQ ID NO:280, SEQ ID NO:281, SEQ ID NO:282, SEQ ID NO:283, SEQ ID NO:284, SEQ ID NO:285, SEQ ID NO:286, SEQ ID NO:287, SEQ ID NO:288, SEQ ID NO:289, SEQ ID NO:290, SEQ ID NO:291, SEQ ID NO:292, SEQ ID NO:293, SEQ ID NO:294, SEQ ID NO:295, SEQ ID NO:296, SEQ ID NO:297, SEQ ID NO:298, SEQ ID NO:299, SEQ ID NO:300, SEQ ID NO:301, SEQ ID NO:302, SEQ ID NO:303, SEQ ID NO:304, SEQ ID NO:305, SEQ ID NO:306, SEQ

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[illegible]

[illegible]

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SEQ ID NO:2015, SEQ ID NO:2016, SEQ ID NO:2017, SEQ ID NO:2018, SEQ ID NO:2019, SEQ ID NO:2020, SEQ ID NO:2021, SEQ ID NO:2022, SEQ ID NO:2023, SEQ ID NO:2024, SEQ ID NO:2025, SEQ ID NO:2026, SEQ ID NO:2027, SEQ ID NO:2028, SEQ ID NO:2029, SEQ ID NO:2030, SEQ ID NO:2031, SEQ ID NO:2032, SEQ ID NO:2033, SEQ ID NO:2034, SEQ ID NO:2035, SEQ ID NO:2036, SEQ ID NO:2037, SEQ ID NO:2038, SEQ ID NO:2039, SEQ ID NO:2040, SEQ ID NO:2041, SEQ ID NO:2042, SEQ ID NO:2043, SEQ ID NO:2044, SEQ ID NO:2045, SEQ ID NO:2046, SEQ ID NO:2047, SEQ ID NO:2048, SEQ ID NO:2049, SEQ ID NO:2050, SEQ ID NO:2051, SEQ ID NO:2052, SEQ ID NO:2053, SEQ ID NO:2054, SEQ ID NO:2055, SEQ ID NO:2056, SEQ ID NO:2057, SEQ ID NO:2058, SEQ ID NO:2059, SEQ ID NO:2060, SEQ ID NO:2061, SEQ ID NO:2062, SEQ ID NO:2063, SEQ ID NO:2064, SEQ ID NO:2065, SEQ ID NO:2066, SEQ ID NO:2067, SEQ ID NO:2068, SEQ ID NO:2069, SEQ ID NO:2070, SEQ ID NO:2071, SEQ ID NO:2072, SEQ ID NO:2073, SEQ ID NO:2074, SEQ ID NO:2075, SEQ ID NO:2076, SEQ ID NO:2077, SEQ ID NO:2078, SEQ ID NO:2079, SEQ ID NO:2080, SEQ ID NO:2081, SEQ ID NO:2082, SEQ ID NO:2083, SEQ ID NO:2084, SEQ ID NO:2085, SEQ ID NO:2086, SEQ ID NO:2087, SEQ ID NO:2088, SEQ ID NO:2089, SEQ ID NO:2090, SEQ ID NO:2091, SEQ ID NO:2092, SEQ ID NO:2093, SEQ ID NO:2094, SEQ ID NO:2095, SEQ ID NO:2096, SEQ ID NO:2097, SEQ ID NO:2098, SEQ ID NO:2099, SEQ ID NO:2100, SEQ ID NO:2101, SEQ ID NO:2102, SEQ ID NO:2103, SEQ ID NO:2104, SEQ ID NO:2105, SEQ ID NO:2106, SEQ ID NO:2107, SEQ ID NO:2108, SEQ ID NO:2109, SEQ ID NO:2110, SEQ ID NO:2111, SEQ ID NO:2112, SEQ ID NO:2113, SEQ ID NO:2114, SEQ ID NO:2115, SEQ ID NO:2116, SEQ ID NO:2117, SEQ ID NO:2118, SEQ ID NO:2119, SEQ ID NO:2120, SEQ ID NO:2121, SEQ ID NO:2122, SEQ ID NO:2123, SEQ ID NO:2124, SEQ ID NO:2125, SEQ ID NO:2126, SEQ ID NO:2127, SEQ ID NO:2128, SEQ ID NO:2129, SEQ ID NO:2130, SEQ ID NO:2131, SEQ ID NO:2132, SEQ ID NO:2133, SEQ ID NO:2134, SEQ ID NO:2135, SEQ ID NO:2136, SEQ ID NO:2137, SEQ ID NO:2138, SEQ ID NO:2139, SEQ ID NO:2140, SEQ ID NO:2141, SEQ ID NO:2142, SEQ ID NO:2143, SEQ ID NO:2144, SEQ ID NO:2145, SEQ ID NO:2146, SEQ ID NO:2147, SEQ ID NO:2148, SEQ ID NO:2149, SEQ ID NO:2150, SEQ ID NO:2151, SEQ ID NO:2152, SEQ ID NO:2153, SEQ ID NO:2154, SEQ ID NO:2155, SEQ ID NO:2156, SEQ ID NO:2157, SEQ ID NO:2158, SEQ ID NO:2159;

or a complement of said sequence.

2. An isolated polynucleotide consisting of a nucleotide sequence selected from the group consisting of:

SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73, SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77, SEQ ID NO:78, SEQ ID NO:79, SEQ ID NO:80, SEQ ID NO:81, SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:85, SEQ ID NO:86, SEQ ID NO:87, SEQ ID NO:88, SEQ ID NO:89, SEQ ID NO:90, SEQ ID NO:91, SEQ ID NO:92, SEQ ID NO:93, SEQ ID NO:94, SEQ ID NO:95, SEQ ID NO:96, SEQ ID NO:97, SEQ ID NO:98, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:101, SEQ ID NO:102, SEQ ID NO:103, SEQ ID NO:104, SEQ ID NO:105, SEQ ID NO:106, SEQ ID NO:107, SEQ ID NO:108, SEQ ID NO:109, SEQ ID NO:110, SEQ ID NO:111, SEQ ID NO:112, SEQ ID NO:113, SEQ ID NO:114, SEQ ID NO:115, SEQ ID NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123, SEQ ID NO:124, SEQ ID NO:125, SEQ ID NO:126, SEQ ID NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130, SEQ ID NO:131, SEQ ID NO:132, SEQ ID NO:133, SEQ ID NO:134, SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:137, SEQ ID NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145, SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ ID NO:153, SEQ ID NO:154, SEQ ID NO:155, SEQ ID NO:156, SEQ ID NO:157,

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or a complement of said sequence.

3. An isolated polynucleotide consisting essentially of a nucleotide sequence selected from the group consisting of:

SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73, SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77, SEQ ID NO:78, SEQ ID NO:79, SEQ ID NO:80, SEQ ID NO:81, SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:85, SEQ ID NO:86, SEQ ID NO:87, SEQ ID NO:88, SEQ ID NO:89, SEQ ID NO:90, SEQ ID NO:91, SEQ ID NO:92, SEQ ID NO:93, SEQ ID NO:94, SEQ ID NO:95, SEQ ID NO:96, SEQ ID NO:97, SEQ ID NO:98, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:101, SEQ ID NO:102, SEQ ID NO:103, SEQ ID NO:104, SEQ ID NO:105, SEQ ID NO:106, SEQ ID NO:107, SEQ ID NO:108, SEQ ID NO:109, SEQ ID NO:110, SEQ ID NO:111, SEQ ID NO:112, SEQ ID NO:113, SEQ ID NO:114, SEQ ID NO:115, SEQ ID NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123, SEQ ID NO:124, SEQ ID NO:125, SEQ ID NO:126, SEQ ID NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130, SEQ ID NO:131, SEQ ID NO:132, SEQ ID NO:133, SEQ ID NO:134, SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:137, SEQ ID NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145, SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ ID NO:153, SEQ ID NO:154, SEQ ID NO:155, SEQ ID NO:156, SEQ ID NO:157,

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or a complement of said sequence.

4. An isolated polynucleotide comprising a nucleotide sequence which hybridizes to a sequence selected from the group consisting of:

SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:23, SEQ ID NO:24, SEQ ID NO:25, SEQ ID NO:26, SEQ ID NO:27, SEQ ID NO:28, SEQ ID NO:29, SEQ ID NO:30, SEQ ID NO:31, SEQ ID NO:32, SEQ ID NO:33, SEQ ID NO:34, SEQ ID NO:35, SEQ ID NO:36, SEQ ID NO:37, SEQ ID NO:38, SEQ ID NO:39, SEQ ID NO:40, SEQ ID NO:41, SEQ ID NO:42, SEQ ID NO:43, SEQ ID NO:44, SEQ ID NO:45, SEQ ID NO:46, SEQ ID NO:47, SEQ ID NO:48, SEQ ID NO:49, SEQ ID NO:50, SEQ ID NO:51, SEQ ID NO:52, SEQ ID NO:53, SEQ ID NO:54, SEQ ID NO:55, SEQ ID NO:56, SEQ ID NO:57, SEQ ID NO:58, SEQ ID NO:59, SEQ ID NO:60, SEQ ID NO:61, SEQ ID NO:62, SEQ ID NO:63, SEQ ID NO:64, SEQ ID NO:65, SEQ ID NO:66, SEQ ID NO:67, SEQ ID NO:68, SEQ ID NO:69, SEQ ID NO:70, SEQ ID NO:71, SEQ ID NO:72, SEQ ID NO:73, SEQ ID NO:74, SEQ ID NO:75, SEQ ID NO:76, SEQ ID NO:77, SEQ ID NO:78, SEQ ID NO:79, SEQ ID NO:80, SEQ ID NO:81, SEQ ID NO:82, SEQ ID NO:83, SEQ ID NO:84, SEQ ID NO:85, SEQ ID NO:86, SEQ ID NO:87, SEQ ID NO:88, SEQ ID NO:89, SEQ ID NO:90, SEQ ID NO:91, SEQ ID NO:92, SEQ ID NO:93, SEQ ID NO:94, SEQ ID NO:95, SEQ ID NO:96, SEQ ID NO:97, SEQ ID NO:98, SEQ ID NO:99, SEQ ID NO:100, SEQ ID NO:101, SEQ ID NO:102, SEQ ID NO:103, SEQ ID NO:104, SEQ ID NO:105, SEQ ID NO:106, SEQ ID NO:107, SEQ ID NO:108, SEQ ID NO:109, SEQ ID NO:110, SEQ ID NO:111, SEQ ID NO:112, SEQ ID NO:113, SEQ ID NO:114, SEQ ID NO:115, SEQ ID NO:116, SEQ ID NO:117, SEQ ID NO:118, SEQ ID NO:119, SEQ ID NO:120, SEQ ID NO:121, SEQ ID NO:122, SEQ ID NO:123, SEQ ID NO:124, SEQ ID NO:125, SEQ ID NO:126, SEQ ID NO:127, SEQ ID NO:128, SEQ ID NO:129, SEQ ID NO:130, SEQ ID NO:131, SEQ ID NO:132, SEQ ID NO:133, SEQ ID NO:134, SEQ ID NO:135, SEQ ID NO:136, SEQ ID NO:137, SEQ ID NO:138, SEQ ID NO:139, SEQ ID NO:140, SEQ ID NO:141, SEQ ID NO:142, SEQ ID NO:143, SEQ ID NO:144, SEQ ID NO:145, SEQ ID NO:146, SEQ ID NO:147, SEQ ID NO:148, SEQ ID NO:149, SEQ ID NO:150, SEQ ID NO:151, SEQ ID NO:152, SEQ ID NO:153, SEQ ID NO:154, SEQ ID NO:155, SEQ ID NO:156, SEQ ID NO:157,

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or to a complement of said sequence.

5. An isolated protein encoded by an isolated polynucleotide of claim 1.

6. An isolated protein encoded by an isolated polynucleotide of claim 2.
7. An isolated protein encoded by an isolated polynucleotide of claim 3.
8. An isolated protein encoded by an isolated polynucleotide of claim 4.

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<110> Jacobs, Kenneth
 McCoy, John M.
 LaVallie, Edward R.
 Racie, Lisa A.
 Evans, Cheryl
 Merberg, David
 Treacy, Maurice
 Genetics Institute, Inc.

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ccgaagcgcc ttttcccaact tgggtggcttc tcttgggata actgtgatga aggaaaggac 180
cctgcagtga tcaaaagcct cagcatccaa cctgacccca ttgtgggttc tggagatgta 240
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gcagcccgtc tgctctctct gggcctcctt ctctgctgctc tgcccctgcc cgtccctgcc 180
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 ctatttgatt tccactctta tatgttcttg tcattgtctc cttgcatggt ggtgcgtgcg 180
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accggaggag aaagcggtea cgtccgcag cctcaggtct tggctctcac tgaaggacag 240
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ataataatac ttttaaaatg aaaggtagga aggaggcatt tgaacaatg gtgagatgtt 420
aagcttgaga attatggaga ataactatcc tggtagaaaa aaacagaaat aaaatatggt 480
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<210> 22

<211> 283

<212> DNA

<213> Homo sapiens

<400> 22

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gaattcggcc aaagaggcct agttagaatg taaggatat cattctaaag atagagtaaa 60
aagaaaacaa aaccaaaagt tattaaaatt gttgtccggt ttactttaac ttagttttgc 120
atagttctag tgcagctgaa attgaaaagt tatttccctt tagctgtgtt attatagagc 180

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agaaattctg tttttaaaaa ttagcctaag atatacttgt ttttgtaaag aaaaatattt 240
aatgttgaac aaaataaatt ggagttggag tagaatactc gag 283

<210> 23
<211> 314
<212> DNA
<213> Homo sapiens

<400> 23
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atcagtatca gcagcgtcgc cagcaggaga atatgcagcg ccagagccga ggagaacccc 180
cgctccctga ggaggacctg tccaaactct tcaaaccacc acagccgcct gccaggatgg 240
actcgctgct cattgcaggc cagataaaca cttactgcca gaacatcaag gagttcactg 300
cccaaaaact cgag 314

<210> 24
<211> 284
<212> DNA
<213> Homo sapiens

<400> 24
gaattcggcc aaagaggcct agcgacaagc aagtgaaga aagttcattt gtaatttggt 60
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agcacatgag catctgcggg ctctatcctc ttatagtagt tcttctttgt ctcaataatc 180
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taaatgttgt caaaagtacc atctttttca cagatgttct cgag 284

<210> 25
<211> 161
<212> DNA
<213> Homo sapiens

<400> 25
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ttgccagcca gcctcattca tcacatattt cctaaataag aataatcagg cagttttgac 120
agaaaaataa aatgtgtccc aaaagaagtc cgtacctcga g 161

<210> 26
<211> 672
<212> DNA
<213> Homo sapiens

<400> 26
gaattcggcc aaagaggcct agctaatttc ccttgacctc cagctgggtt ccaagctgtt 60
ttaggagagg aagacagagt ttccaagtta ggagaggaag acagagttcc aagtgaatgc 120
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tactttctcc ctctggaaag gaatggaaga agaggtgaaa tgttacttca tttggaagcc 240
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ctcaagccag accaaagtat cctcttccc attcagagcc agtgaggacc tgtctctgtc 480
cctgtcctc ctgtgccctc tgtgtgcggt gtcctttccc atctcctgct ggcttacatg 540
gcttcaagct ccacctcaaa gcgtcctgca ccaggcattg ccagcgatct ccccttcaca 600
atggctagc tccatggtc tgtgtctcct tatttcttct gaccttcttt ctttcacccc 660
tgtgcactcg ag 672

<210> 27
<211> 144
<212> DNA

<213> Homo sapiens

<400> 27

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gaattcgcg cgcgctcgac aagagccact ggcctgtaat tgtttgatat atttgtaa 60
actctttgta taatgtcagg ttcaaggaca cactgttcca caatttcccg taagttgggg 120
ttttccattg cagctaccct cgag 144
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<210> 28

<211> 250

<212> DNA

<213> Homo sapiens

<400> 28

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gaattcgcg cgcgctcgac cctaaacat ctacttccca gtcttctttc tagatttatt 60
cctttctttc cttctctctc agttagggtt gagctttttc aattcttaga atataccaag 120
tttactccct accttaaggc cttcacattt gttgtctcaa cctgaatgct cttacattag 180
atacagtatg gtttgcctct ttatttcttt catatttctc ttcataacc ttgtccccag 240
aaagctcgag 250
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<210> 29

<211> 277

<212> DNA

<213> Homo sapiens

<400> 29

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gaattcgcg cgcgctcgac cctcaggagc tatacaacag aaacaacaaa cacaagtga 60
aaacctctg aacttagcag acctagatat gttttcctca gttaattgca gcagcgagaa 120
accattgtct ttttcagctg tgttttagcac atcaaaatca gtttctacac cacagtcaac 180
aggttctgct gctactatga cagcattggc agcaacaaaa acttctagtt tggctgatga 240
ttttggagaa ttcagccttt ttggggaatc actcgag 277
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<210> 30

<211> 258

<212> DNA

<213> Homo sapiens

<400> 30

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gaattcgcg cgcgctcgac tgtgaatgtt aatattcctg aaaagactac agcactgaat 60
aatatggatg gcaagaatgt taaagcaaaa ttggatcatg ttcaatttgc agaatttaag 120
attgacatgg attctaaatt tgaaaatagc aacaaagatt taaaggaaga attgtgccct 180
ggaaatctaa gttctagttg tacaaggcaa cacagttcag cacattcaaa tcaagataaa 240
aaagacgatg agctcgag 258
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<210> 31

<211> 308

<212> DNA

<213> Homo sapiens

<400> 31

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gaattcgcg cgcgctcgac gtctgcagtc caattaattt ctgaagtatt tctaaagaga 60
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atatttcatt ctttagtaat tcttgaggcg actgtgaaag gaggatggaa gaaatccagt 180
acttttactc tttacattgg acaagttatt tgtggagata attgctcaat ttcagtatga 240
gtgcagtgat tttgatgcag ttgtgttttt ctttttttatt ctttttttga gaaggctctc 300
agctcgag 308
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<210> 32

<211> 338

<212> DNA

<213> Homo sapiens

<400> 32
gaattcgcg cgcgctcgac gtaaccaacc atttcagcat ctgggttgc actagcctca 60
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ggagaattaa gagtgtcatt ccagtgtatc tattgggggc ttgtttattt ttgggttgc 180
atcttgttgt ggtaaacatg gatgagagta tgtggacaaa agaatatgaa ggaaacgtga 240
gttgggagat caaattgagt gatccgacgc acgtttcaga tatgactgta accacgcttg 300
caaacttaat accctttact ctgtccctgt tactcgag 338

<210> 33
<211> 217
<212> DNA
<213> Homo sapiens

<400> 33
gaattcgcg cgcgctcgac ttgggggga agtaaaaatt actctattat taaagtgatt 60
gttacagcca ctgatctgta cattaataat ttgtgaaatt attacaaata aattaaagct 120
tggtaaaatt gattgaaaa acgttatggg ccaggcgag tggtcatgc ctgtaatttc 180
aacagtttgg gaggccaaag caagcggatc actcgag 217

<210> 34
<211> 395
<212> DNA
<213> Homo sapiens

<400> 34
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ttgatggaaa taaaaattca cctgctgaca catgtgtaga ggaagatgct acagttttgg 120
ctaaggacag agctgtctaat aaggaccaag aactgattga aaatgaaagt tatagaacaa 180
aaaacaacca gaccatgaaa catgatgcta aaatgagata cctgagtgat gatgtggatg 240
acatttcctt gtcgtctttg tcatctcttg ataagaatga ttttaagtga gacttttagtg 300
atgattttat agatatagaa gactccaaca gaactagaat aactccagag gaaatgtctc 360
tcaaagaaga gaaacatgaa aatggggcac tcgag 395

<210> 35
<211> 183
<212> DNA
<213> Homo sapiens

<400> 35
gaattcgcg cgcgctcgac gggagcaagg ataaaagaac aacaaaagac agaaaatttt 60
taatactagg gaaattagag catgtttgtg gacagaagga gaacaatcag aagacaggaa 120
gagaaaatag aaaataaaat agaagcacct aaaccgtcga ttgaattctg gcctgcactc 180
gag 183

<210> 36
<211> 248
<212> DNA
<213> Homo sapiens

<400> 36
gaattcgcg cgcgctcgac gtttgaagtt cattgaactt tgtggatgtg taaattatgt 60
ttttcatcaa attgggcaag tttttagcca ttatttctcc taaatttttc tgctttttcg 120
tctgtacct tggttactcc cattacacat atgtcagtat atttaattgg atcccatc 180
tctctcatgc tctgttcatt tttctttatt cttttttctc tctcttcttc agatggcata 240
aactcgag 248

<210> 37
<211> 222
<212> DNA
<213> Homo sapiens

<400> 37

gaattcgcgg ccgcgtcgac cgagtcgggt gacaaagtga gaccctgtgt ctaaaaagag 60
 agagagaaaa aaagctaagg ctattttcag gttaggtcag gcttagtaac aaaaactttt 120
 tgtgaaatgc ttcgatcatt gtttgccctg ctccctaatt cccttaaaac ctcccggatc 180
 agacagggtg tctttgaaga tgagttcaca gcctccctcg ag 222

<210> 38

<211> 264

<212> DNA

<213> Homo sapiens

<400> 38

gaattcgcgg ccgcgtcgac gtctggccct cttaatttct ccatctgtac ccttttttag 60
 gtgagctcag atctgacctg tttttctgag ctgcagactt gtttatctaa ttgtctaatt 120
 gacatccact tggatgtctg atagttatcc cagatctaac attggccaaa tcgctctttt 180
 ttcccccaa atctcccttg atttctcctt taaaaccccc ttctcaaagc tatgctcaaa 240
 ctaaaattct taggagctct cgag 264

<210> 39

<211> 226

<212> DNA

<213> Homo sapiens

<400> 39

gaattcgcgg ccgcgtcgac cttacataaa ttccatact ccttttttat tctgacgtta 60
 tacaatgaag aaagcaaagt tgaaattgtc atgtcatatg tgccctgtta tgtatgccta 120
 catacattgg gtatgtgaga ttgtggcggg ggggtgttcc cctagctttt tgtctataat 180
 ttctgatttt attgcaataa atttaaaact caacacagag ctcgag 226

<210> 40

<211> 257

<212> DNA

<213> Homo sapiens

<400> 40

gaattcgcgg ccgcgtcgac ctagtattat agttttattct tctgctcggt tttggagttt 60
 gttttttgtt ttctagtttt tttaggtgcg aggtgagggt gttaattgga cgtctatctc 120
 cttggtgtag acgttttagt ctgtctagtc ctcttaacac tgtgtttgtc gcaaccacaga 180
 gggttttgcc tgttttcatt ttttaacaaa tgattttgtt ttctgtcata attttcttgt 240
 ttacccaaaa cctcgag 257

<210> 41

<211> 220

<212> DNA

<213> Homo sapiens

<400> 41

gaattcgcgg ccgcgtcgac tgcaagtaag gactatggaa aattttccaaa ccagattgga 60
 tcgttcagaa gccattcttc tgttgattct ttacactttc ctcccattag ccgaaagaat 120
 tgagagccaa cctttccaaa tgcccctgtc cccgttagca ggcaccaaag agctcatttc 180
 atttctctgt gccagcttaa tactcaccag ggcactcgag 220

<210> 42

<211> 289

<212> DNA

<213> Homo sapiens

<400> 42

gaattcgcgg ccgcgtcgac gttacttttg caacaagttc ttttaccctt acccgtggta 60
 tttgaaaaaa atcaaggtaa ctgtctgaat actttaatat cagcttggtt tgtgaattct 120

ctgaatactg tcaacactct tatctaagtt tgcctttatg atgcagtggc agcattttga 180
 attacttttc aaagaatact gttcatatgc attgtttttg tgtttcaaac taaatacagg 240
 cagttttgtg ccagctgtga tattgtgcat accatatgga cacctcgag 289

<210> 43
 <211> 252
 <212> DNA
 <213> Homo sapiens

<400> 43
 gaattcgcgg ccgcgtcgac ttttaacttaa aaattggctg tcatctcaga atttaactta 60
 aatttatata aatatttttg tagtagttaa taggtatatt ggtagtaatt tggtagtttg 120
 gtacattttg tagtaattaa taggtacatt ttctgcctgt gtagattgtt taagaaaaca 180
 gtgataatta tgcaagaaa tgttcaaata actgtttggg tagtgatttt ggcttatttg 240
 gtcactctcg ag 252

<210> 44
 <211> 162
 <212> DNA
 <213> Homo sapiens

<400> 44
 gaattcgcgg ccgcgtcgac ctaagttcca ctttttattt agattccact agttttccca 60
 ttaagtcca tttctgttct agaatccaat ctttttcctg tatgctatgg attatcagac 120
 ccctcacttg ggttcctctt acatcaccaa gatgtgctcg ag 162

<210> 45
 <211> 281
 <212> DNA
 <213> Homo sapiens

<400> 45
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 ttctgttttg ggctcatgt ccagcaagtg atagtctcat taggagcgtg gtagaacata 120
 gcgaagcctg gcatttggtt cctccctctg tctcccaaag tgctgggatt acaggcgtga 180
 gccactgccc ctggtctggt tcttcccgta tgtgtgccac ataccgtgag ccattcagat 240
 ggatgaaagc aaacttcctt ataaaaggcc agaagctcga g 281

<210> 46
 <211> 265
 <212> DNA
 <213> Homo sapiens

<400> 46
 gaattcgcgg ccgcgtcgac caccagacaa ctctatgagg gcagaaatta gatctatttt 60
 gctcatcatt gtatctccag agtccaacac aatgcccagc attggagtaa ggtattttaa 120
 tatttttaaa aaattttttt tgagagacag ggtctccctc tgtcacccag gctgggggtg 180
 agtggcacc ccatggctca ctctaacagc ctcttgggct caagcagtc gaactacagg 240
 tatgtgctac cacaccgagc tcgag 265

<210> 47
 <211> 336
 <212> DNA
 <213> Homo sapiens

<400> 47
 gaattcgcgg ccgcgtcgac aaagtgctag aaaatcatgt tccttgtcct gagtaagagt 60
 taatcagagt aaatgcattt ctggagttgt ttctgtgatg taaattatga tcattattta 120
 agaagtcaaa tcttgatctt gaagtgcctt ttatacagct ctctaataat taaaaatc 180
 cgaaagtcat ttcttgggaa acaagtggag tatgccaaat tttatatgaa tttttcagat 240

tatctaagct tccaggtttt ataattagaa gataatgaga gaattaatgg ggtttatatt 300
 tacattatct ctcaactatg tagcccgctt ctcgag 336

<210> 48
 <211> 703
 <212> DNA
 <213> Homo sapiens

<400> 48
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 agaaatcatg tgcaaattgg aaagcattaa agagatcagg aacaagaccc tgcagatgga 120
 gaagatcaag gctcgtttga aggctgagtt tgaggcactt gaggcagagg aaaggcacct 180
 gaaggaatac aagcaggaga tggaccttct gctacaggag aagatggccc atgtggagga 240
 actccgactg atccacgctg acatcaatgt gatggaaaac actatcaaac aatctgagaa 300
 tgacctaaac aagctgctag agtctacaag gaggctgcat gatgagtata agccactgaa 360
 agaacatgtg gatgccctgc gcatgactct gggcctgcag aggcctcctg acttggtgta 420
 agaagaggag aagcttttct tggattactt tgagaagcag aaagcagaat ggcagacaga 480
 acctcaggag cccccatcc ctgagtcctt ggcgctgca gccgctgccg cccaacagct 540
 ccaagtggct aggaagcagg atactcgga gacggccacc ttcaggcagc agccccacc 600
 tatgaaggcc tgcctgtcat gtcaccagca aattcaccgg aatgcaccta tatgccctct 660
 ttgcaaggcc aagagtcggt cccggaaccc caataaactc gag 703

<210> 49
 <211> 247
 <212> DNA
 <213> Homo sapiens

<400> 49
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 ggaaggctgg acacctcttc tcaactacaag gcttcacctc ctctccggtg cctcgcagg 120
 ggtagccctg cgtgcccgtg gcctggcaca tgcggaagcg gcgctgccag cctgtgtcac 180
 acgtcttaga gcacaggctc cagcattcc atggccccca cttgctatca gtggccgggc 240
 actcgag 247

<210> 50
 <211> 290
 <212> DNA
 <213> Homo sapiens

<400> 50
 gaattcgcgg ccgcgtcgac aaataatacg tattccatac tcaggatagc tggttagcta 60
 gcaaaagaat taacatttgt gatatttact tgcaaacctt actgaagcca tattcattat 120
 ctcccttgtc accaaggctg ttgaccttaa ataaacatta agttgatttt gcacaacact 180
 gtatttgtgt gtgtgcatgt gcctgttttt gtgtgtgtat gtttgtggga aataattatg 240
 tttgtttccg catatattca tttttaatgc attctgtaac ttttctcgag 290

<210> 51
 <211> 417
 <212> DNA
 <213> Homo sapiens

<400> 51
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 tggaggctgt ggccgttttg ttttcttggc taaaatcggg ggagtgaggc gggccggcgc 120
 ggccgcgacac cgggctccgg aaccactgca cgacggggct ggactgacct gaaaaaaatg 180
 tctggatttc tagagggcct gagatgctca gaatgcattg actgggggga aaagcgcaat 240
 actattgctt ccattgctgc tgggtgtacta ttttttacag gctgggtggat tatcatagat 300
 gcagctgtta tttatccac catgaaagat ttcaaccact cataccatgc ctgtggtgtt 360
 atagcaacca tagccttctt aatgattaat gcagtatcga atggacaagt cctcgag 417

<210> 52

<211> 379

<212> DNA

<213> Homo sapiens

<400> 52

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gaattcgcg cgcgctcgac tgaagatgct gcggctggca ctaactgtga catctatgac 60
cttttttatc atcgcaacaag cccctgaacc atatattgtt atcactggat ttgaagtcac 120
cgttatctta tttttcatac ttttatatgt actcagactt gatcgattaa tgaagtgggt 180
attttggcct ttgcttgata ttatcaactc actggtaaca acagtattca tgctcatcgt 240
atctgtgttg gcaactgata cagaaaccac aacattgaca gttggtggag ggggtgttgc 300
acttgtgaca gcagtatgct gtcttgccga cggggccctt atttaccgga agcttctgtt 360
caatcccagc ggactcgag                                     379

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<210> 53

<211> 105

<212> DNA

<213> Homo sapiens

<400> 53

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gaattcgcg cgcgctcgac aagaagcgta tggactacta tgactctgaa caccatgaag 60
actttgaatt tatctcagga acacgaatgc gcaaactcgc tcgag                                     105

```

<210> 54

<211> 237

<212> DNA

<213> Homo sapiens

<400> 54

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gaattcgcg cgcgctcgac gttgatgggtg agaatgatgg cagctgctgt ttgttgggca 60
ccagctgttg tcaggtacag tgctaagcac ttttaattaca ctgttaagtc accaggacag 120
aaactcccc acaccagctc tgtaataggg gtgagtgttg gacataagca gggagttgac 180
aagaagccaa gactaggctg ggcacagtg ctcacgctg taattccagc cctcgag 237

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<210> 55

<211> 220

<212> DNA

<213> Homo sapiens

<400> 55

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gaattcgcg cgcgctcgac gaagaaagaa aaactagcaa acatttgaga aatttagcaa 60
ctgttttttt ttaaataaag caatttggtc taataattat ttctaatca tcttaaaata 120
cgctgtcatt aacggcagag aaagctcttt atttctttt gaattttaat actgggtaga 180
aatataaatt acaatgaaag tcagcaggaa agaactcgag                                     220

```

<210> 56

<211> 247

<212> DNA

<213> Homo sapiens

<400> 56

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gaattcgcg cgcgctcgac caaaaataaa taagctcagg aataaagtga attggaagac 60
agaaataatt tctgaaatga accagatata tgaggataat gataaagatg cacatgtcca 120
agaaagctat acaaaagatc ttgattttta agtaataaaa tctaaacaaa aacttgaatg 180
ccaagacatt atcaataaac actatatgga agtcaacagt aatgaaaagg aaagttgtaa 240
tctcgag                                     247

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<210> 57

<211> 229

<212> DNA

<213> Homo sapiens

<400> 57

gaattcgcgg ccgcgtcgac gtgtgttga aaacactgtg ggctcaatga aaaacccctt 60
tcggcccagt cctttgcctc cacattccag cttggcgccc tcagccacac cactctggat 120
gagttccaag atcttggtgt actgtttctt atcaatctgg ggaccctgct cagtgggtggg 180
gtcaaaggga ctccccacta cgcgcctctt ggcccgtcc acactcgag 229

<210> 58

<211> 146

<212> DNA

<213> Homo sapiens

<400> 58

gaattcgcgg ccgcgtcgac tgaggagag attggtcagt ctgttcaaaa ttacagatag 60
gaagaagagt aagttctggt gttctcttgc acagtagggt aactatgggt aacaatattg 120
catatttcaa aacagctggc ctcgag 146

<210> 59

<211> 139

<212> DNA

<213> Homo sapiens

<400> 59

gaattcgcgg ccgcgtcgac cctgcacctt gtctgtctga caaacacctt cttatttgat 60
gctattcaag cctcacctcc tcttactctg cactccttcc tactttcacc ttccagatga 120
aaataaccac ttctctgag 139

<210> 60

<211> 325

<212> DNA

<213> Homo sapiens

<400> 60

gaattcgcgg ccgcgtcgac cctttccggt tgatttgtca ctgcttcaat caataacagc 60
cgctccagag tcagtagtca atgaatatat gaccaaatat caccaggact gttactcaat 120
gtgtgccgag cccttgccca tgctgggctc ccgtgtatct ggacactgta acgtgtgctg 180
tgtttgcctc ccttccctct ccttctttgc cctttacttg tctttctggg gttttctgt 240
ttgggtttgg tttgtttttt atttctcctt ttgtgttcca aacatgaggt tctctctact 300
ggctctctta accatgggtgc tcgag 325

<210> 61

<211> 241

<212> DNA

<213> Homo sapiens

<400> 61

gaattcgcgg ccgcgtcgac tcttattcct tcttgaaaat tttaagtgtt atggttttat 60
atagttcagt tctttgagat ttttgaaaag agtattttca gtaataaacg tgccatctct 120
atctcttaaa catatttacc aacaattgtt ttaaaataga aaaaataaaa tgcttctatt 180
ttaccttttt ttcatttcag aagcattatt ctgtttatta acagtgtccc atctcctcga 240
g 241

<210> 62

<211> 392

<212> DNA

<213> Homo sapiens

<400> 62

gaattcgcgg ccgcgtcgac gcacgtggca ctggaggagc ggctttttgc acccccaggc 60
ttcagggaag ttctcaatag aaaacccact agttgtctca tatgactggt attaaactctg 120

acttaaaaaa aaaatcaagc cagaaacagt gtgttgagca agaaaggaaa aaagattcct 180
tattaaaagt tcaaacataa acagaaggct caggacctcc ttgactacct ctcttgccac 240
gtggcccagg agaaccatg gctggcagtt taacagccac cctcctgctt ctgctctgtg 300
cattttgtgg atgcacatcc acgtttttct tttcttttga gacagggtct cactctgttg 360
cccaggctgg aatgcaatgg cgcgatctcg ag 392

<210> 63
<211> 293
<212> DNA
<213> Homo sapiens

<400> 63
gaattcgcg cgcgctcgac aggtccagt ttcctgtatg cattggatgg aagtgcacgt 60
agaaagcagt gttctcacat ctttttataa tgctgaggat gaatcaaate ttctcttacc 120
taaaactacct acactgccaa aaaactatag caacacctca aaaatattta gtgaagaaaa 180
ttctgatgaa attattaagc tcttgggaga cgtcaggctt aatattctcg tccttggagg 240
aagctctgga tttattgagc tttatgctta tggaatgttt aaaattgctc gag 293

<210> 64
<211> 449
<212> DNA
<213> Homo sapiens

<400> 64
gaattcgcg cgcgctcgac ccccttccaa aagcaaaaag aagcctcgaa agtgaaatgt 60
atctggaagg tctgggcaga tcacacattg ctccccccag tccttgctct gacagaatgc 120
ccctaccatc acccaactgag tctaggcaca gcctctccat cctcctgtc tccagccctc 180
cggagcagaa agtgggtctt tatcgaagac aaactgaact tcaagacaaa agtgaatttt 240
cagatgtgga caagctagct ttttaaggata atgaggagtt tgaatcatct tttgaatctg 300
cagggaacat gccaaaggcag ttggaaatgg gcgggctttc tctgcccggg gatatgtctc 360
atgtggacgc tgctgcagct gctgtgcccc tctcatatca gcaccaagt gtagatcaga 420
aacaatttga agaacaaaaa gaactcgag 449

<210> 65
<211> 247
<212> DNA
<213> Homo sapiens

<400> 65
gaattcgcg cgcgctcgac ggggctggag tataatagga gcggagagat agaaaagaga 60
ggcaaaggaa gatcacagcc atcacaaagc aatctaggca gaaagtgata ggaaaaaag 120
gagaaactat tcattctcaa ctattgctgg tatacacaaa cctctgaaaa tagccaatta 180
gtgttagatg ttctatcagg cgtggggaat ggggatggtt acaaaattca tcctcccagt 240
tctcgag 247

<210> 66
<211> 227
<212> DNA
<213> Homo sapiens

<400> 66
gaattcgcg cgcgctcgac cgcggccgag tcgacctgct ggcagggttt ttttgtttta 60
tttgtttgc tttttttaa ttaactgttt tgagctttga atacttaagg ctttagaggg 120
agaacccaat tttcaattat gttggctttt tataaagctt gagttatgta agatttaaat 180
aaaagtttgc taccaagatg attgccttat tgaatagatc actcgag 227

<210> 67
<211> 384
<212> DNA
<213> Homo sapiens

<400> 67

```

gaattcgcg cgcgctcgac tgacattcct gttggagact tacatccagg ggaacagctg 60
gaaaaaatgt tgtatgttcg ctgtggaaca gggggttcca gaatgtttct tgtatatgtt 120
tcttaacctga taaatacaac cgttgaagaa aaagaaattg tttgcaagtg tcacaaggat 180
gaaactgtaa caattgaaac agtcctttcca tttgatgttg cggttaaatt tgtttctacc 240
aagtttgagc acctggaaag ggtttatgct gacatcccct ttctgttgat gacggacctc 300
ttaagtgcct caccctgggc cctcactatt gtttccagt agtccacact tgctccatcc 360
atgaccacag tggaccagct cgag 384

```

<210> 68

<211> 302

<212> DNA

<213> Homo sapiens

<400> 68

```

gaattcgcg cgcgctcgac ctaaaaccgtc gattgaattc tagacctctc acccaagctc 60
ctctctcctt gcagtgaaga cctccccctc cagtaacctt ttttctctgt gaaaaccctt 120
caaccccttt tcaggacctc tctcaacccc atcttcccat ttgtgtccca ccagtccctt 180
ccccaacctg ccaatatttc aataaccccc cgcaccacag ttgtctgcgc ttttctgccc 240
caatgcacat accctggaac ctggtttctc tcttctgttg gggcccaacc cccctctctg 300
ag 302

```

<210> 69

<211> 184

<212> DNA

<213> Homo sapiens

<400> 69

```

gaattcgcg cgcgctcgac gatacaatct gcaaatgata aaaatttcga cgatgaagat 60
tctgtggatg gtaacagacc ttctctctgt agttctacat catccaaggc tccaccaagt 120
tctcggagaa acgttggat ggggaaccacc cgcgggcttg gttcatccac ccttggacct 180
cgag 184

```

<210> 70

<211> 262

<212> DNA

<213> Homo sapiens

<400> 70

```

gaattcgcg cgcgctcgac caaaaacaaa acaaaacaaa aaaactttgc ccacttcttt 60
ttatatgtgt gtgtcttctg aggttatcac ctgaagggat atttatggac tgaagagttg 120
ttagtattat ttgtgtatct tttactttgt tagaatacat acttatcttc taatgaaatt 180
attccagaaa actttaaaag agtcatttaa attgcctgtt agtatagtta taaaattgac 240
agagcagtg caaaaactcg ag 262

```

<210> 71

<211> 166

<212> DNA

<213> Homo sapiens

<400> 71

```

gaattcgcg cgcgctcgac aaaggatgga caacaaaaac aaatgcctat gtgtgataac 60
catgatgatg gtgaaactgc agcaatcatt ttatgcaatg tctgtggaat tttatgtaca 120
gactgtgaca gattccttca ccttcacga agaaccacaa ctcgag 166

```

<210> 72

<211> 370

<212> DNA

<213> Homo sapiens

<400> 72
 gaattcgcgg ccgcgctcgac cctaaaccgt cgattgaatt gtaagccaaa ctgtcgttaa 60
 gtcggggact gtctgtatac cctaaagtga tttccttacc cttcccaaaa ccgactcttc 120
 ctatatattc tgatttaaga aataggagta ataccactta ccttacagct tctgggtca 180
 ctctctcatt gagttaacca atagatcttt gaattcctaa cctttttctt atccatcctt 240
 cccttttcag tgttctgttc ctatgctagt tcatgccttc ttacatctct tgetgaggtt 300
 tttccatatt ctcgtaactt gtctccttgc gtctactctt cagtctgtct tccttaccac 360
 cagactcgag 370

<210> 73
 <211> 287
 <212> DNA
 <213> Homo sapiens

<400> 73
 gaattcgcgg ccgcgctcgac ggacaccaagc ggaaaataaa ctccaacctg ggcaacagag 60
 caagactctg tctaaaaaaa aaaaaaagtt aatggcattt ctatccctgt cttgctaact 120
 agaaacctgg gaggagactc aagactgttc tcttcagtca gcttcccatg cctattttat 180
 atcccactag tttattttat gagctatgtc tcaaaatcat actcttctct ctttgtctct 240
 cttacttgat cattgggtcag gctgtacctc tcagccaccc tctcgag 287

<210> 74
 <211> 212
 <212> DNA
 <213> Homo sapiens

<400> 74
 gaattcgcgg ccgcgctcgac ccaatgagga aggcacaaga aatcgagacc gggacagaga 60
 ctatagtcgg cgagctgggtg ggccaccaag acggggggaga ggtgccagcc gtggacgaga 120
 gtttcgaggt caggaaaatg gattggatgg caccaagagt ggagggcctt ctggaagagg 180
 aacagaaaga ggcagaagga taccggctcg ag 212

<210> 75
 <211> 314
 <212> DNA
 <213> Homo sapiens

<400> 75
 gaattcgcgg ccgcgctcgac acccctcccc catccaactt tcaggttacc tgaaaaataa 60
 gactagttat aaattgacaa gttgtcggga aattttgcag caataaaggg ggcaagtggg 120
 aggcagagca ctttctagat cttgactttt ccatggccca tgtaagatca ctaaactgtt 180
 cttttatttt tcgacagtta gcacctgctg ttgatataata ctaaatggcg ggaacatgtt 240
 ttttttgggt tttgtttgtt ttgttttgtt ttgtttttcg agacggagtc tcgctctgtc 300
 cccaagctct cgag 314

<210> 76
 <211> 268
 <212> DNA
 <213> Homo sapiens

<400> 76
 gaattcgcgg ccgcgctcgac aagtgagcac acgaaatcaa agcatgaaag cagaaaagaa 60
 aagaggaaaa actatccaga atggcaggga attgtttgag tcttcccttt gtggagacct 120
 tttaaatgaa gtacaggcaa gtgagcacac gaaatcaaag catgaaagca gaaaagaaaa 180
 gaggaaaaaa agcaacaagc atgactcacc aagatctgaa gagcgcaagt cacacaaaaa 240
 ccccaaatta gaaccagagg acctcgag 268

<210> 77
 <211> 295
 <212> DNA

<213> Homo sapiens

<400> 77

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gaattcgcg cgcgctcgac aattttaagt taagtcccat atgaaggctc aaaagagcgg 60
taaagaacaa cagcttgaca ttatgaacaa gcagtaccaa caacttgaaa gtcgtttgga 120
tgagatactt tctagaattg ctaaggaaac ggaagagatt aaggaccttg aagaacagct 180
tactgaaggc cagatagcag caaatgaagc cctgaagaag gatttagaag gtgttatcag 240
tgggttgcaa gaatacctgg ggaccattaa aggccaggca gctcaggccc tcgag 295
```

<210> 78

<211> 148

<212> DNA

<213> Homo sapiens

<400> 78

```
gaattcgcg cgcgctcgac acatactttg cattttccac tgttactttg ataccatttt 60
tagttgcgaa acacgtggca tgtttcggga aatgaatagc tttcaagata gtggagagat 120
tcctaacgtt gtcaaggctg agctcgag 148
```

<210> 79

<211> 224

<212> DNA

<213> Homo sapiens

<400> 79

```
gaattcgcg cgcgctcgac ataaatttgc tgcggctgga ctcaaggaa atctcaatgt 60
ctttctctct gaccttggga gcccacggga gccctttggg gcaagtcagc ctgtcagtct 120
gtgggtgctg tagcggggga ggcatacctt catcccgttc caggggaaac gtctccccct 180
ccagactgtt gtcatacatc ttctctctct cctctactct cgag 224
```

<210> 80

<211> 288

<212> DNA

<213> Homo sapiens

<400> 80

```
gaattcgcg cgcgctcgac gtttcaaaata aatgcttaaa gtttaatat acttgaaggc 60
aagagaagac aaagaacccc caaaatatta gaaaagatta taaaagacat tataaggttg 120
gaattcttac totttgaatt ccatatttgt ttattatttt actaatgttc taatattaag 180
ttcatgataa gtcacacaca tatgttttct ccacactctt tccacctatc agtttttcta 240
acatattatt gttttaaaat tcttaatttt attacagcaa tcttcgag 288
```

<210> 81

<211> 251

<212> DNA

<213> Homo sapiens

<400> 81

```
gaattcgcg cgcgctcgac tttgaagggt gtttgttgtt gttgattctt agaggcagat 60
atctgactac gttgtgttta tactttagct atatgaatgt ttacctattg aaaatactgt 120
tttattaaaa attactttgt tccctatacc ttaggagata aatgtacatt ttaaaagtgt 180
tcctcagtca ggtgaggttg cttatgcctg taagttcaac acttggggag gccgaaccag 240
gaggactcga g 251
```

<210> 82

<211> 498

<212> DNA

<213> Homo sapiens

<400> 82

```

gaattcgcg cgcgctcgac gtccatggct gaggagaaga ggaagcgaga ggaagaggag 60
aaggcacagc aggtggccag gaggcaacag gaggcaagag ctgtgacaaa gaggagccct 120
gaggctccac agccagtgat agctatggaa gagccagcag taccggcccc actgcccag 180
aaaatctcct cagaggcctg gctccagtt gggactcctc catcatcaga gtctgagcct 240
gtgagaacca gcagggaaca ccagtgccc ttgctgccc ttaggcagac tctcccgag 300
gacaatgagg agccccagc tctgccccct aggactcttg aaggcctcca ggtggaggaa 360
gagccagtgt acgaagcaga gcctgagcct gagcccgagc ctgagccga gcctgagaat 420
gactatgagg acgttgagg gatggacagg catgagcagg aggatgaacc agagggggac 480
tatgaggagg tgctcgag 498

```

<210> 83
 <211> 277
 <212> DNA
 <213> Homo sapiens

```

<400> 83
gaattcgcg cgcgctcgac cttcagtcga tcttacatat ggccaagttt gcttcctaaa 60
agttcagatg ttgtcatatt gctataatgc tcaagactct tccactcccc actgcctaag 120
gaattcagta cagacttctc agggcgcttt gaacacaaat ccaaccactc tacgcagccc 180
tatctccac tgctccctcc acaagcttca ttctttatta agatggggac tatctggtat 240
gcagatagcc agccacatct tccctctgc cctcgag 277

```

<210> 84
 <211> 526
 <212> DNA
 <213> Homo sapiens

```

<400> 84
gaattcgcg cgcgctcgac ggatgggtgaa cgggcaggag catctagtga ttgatggctt 60
ctgggtggtt ttaacgagag tttgaacaaa gactcagaaa tggtttttaa aataacagtc 120
ccatgtggcc cacatagaaa atattgggat attttaaggt gtggattcac ttttccatat 180
ttaaacactt gtttctactt ggtgaaatac acaggtgaca agtcaacttc aggaataatg 240
gtttttttta gaagatggga gttgggaatt tcttatattt tctctcact tcttaaaacc 300
acctttgtgc cctgcttcta cattaggaaa aatggaaagg tgattaaaca cggccgttag 360
gagcctaaaa tctaggtcag agtcccgtat gaaagaaatc agataagttg agagagggcg 420
tgtgcagggt ggaatgggtg gcgtccatct ctgctggggc gtcgatgcc cctggctgga 480
cagggtggagc ctggaaggta gggaggctcg gaacatgaag ctcgag 526

```

<210> 85
 <211> 307
 <212> DNA
 <213> Homo sapiens

```

<400> 85
gaattcgcg cgcgctcgac gtaaccccg ctcctcctc ccccccaccg ctggaaacca 60
cgactccgcc gccacctct gcatttgact gctccaagta cctcaggaaa tgacctcatg 120
cggctcctcg acgttcgctt ccatcttggt tatttccagc gtttggccc tgggagcgat 180
gagcgacct gttcagcccc tgccttcagt tctttcagg agttctcagc tggctctcag 240
aggttccac acgtgtctc ccacagcagc tgcaccattg tacattccaa cagcaacaga 300
gctcgag 307

```

<210> 86
 <211> 194
 <212> DNA
 <213> Homo sapiens

```

<400> 86
gaattcgcg cgcgctcgac cgaggatttg gtgtaggaag agaaaaagag attgatgggg 60
taaatttgac tcacacatat atcatcaact cattttcaag agatttgctg tcatcaattg 120
attttcaaca gagacacgag agctagtcca tgaggaaagg aaagcatata acaaatttgc 180

```

tgggactact cgag

194

<210> 87

<211> 223

<212> DNA

<213> Homo sapiens

<400> 87

gaattcgcg cgcgctcgac atttggttct ttctactca gaactactca gaaacaacta 60
 tatatttcag gttatttgag cacagtgaac gcagagtact atgggtgtcc aacacaggcc 120
 tctcagatac aaggggaaca caattacata ttgggctaga ttttgcccag ttcaaaatag 180
 tatttgttat caacttactt tgttacttgc atcaatcctc gag 223

<210> 88

<211> 265

<212> DNA

<213> Homo sapiens

<400> 88

gaattcgcg cgcgctcgac gacaacatca aaagcaactg atgactcttg aaaacaagct 60
 aaaggctgag atggatgaac atcgctcag attagacaaa gatcttgaaa ctcagcgtaa 120
 caattttgct gcagaaatgg agaaacttat caagaaacac caggctgcca tggagaaaga 180
 ggctaaagt atgtccaatg aagagaaaaa atttcagcaa catattcagg cccaacagaa 240
 gaaagaactg aatagttttc tcgag 265

<210> 89

<211> 176

<212> DNA

<213> Homo sapiens

<400> 89

gaattcgcg cgcgctcgac aaattggaaa ctgtagaagt gttaatgtgt cctatggact 60
 caatagcaga gtttattttt gtttttaatg gcaaggcttc tagagtcaat gattgtatga 120
 gtttgctact ctggctgtgc ttacagcttc atccaagtac aaaggaagaa ctcgag 176

<210> 90

<211> 196

<212> DNA

<213> Homo sapiens

<400> 90

gaattcgcg cgcgctcgac ggtgtgttat tgtttttatt ggctgtacct ggtagaattg 60
 aaaaatcagc atttctattg tagctacta atttcagtga aatattttct tagaaatata 120
 aaatctggaa ctttccatca ttatgcctcc ccaaaataat agaggacttt acacacagat 180
 aacacctgcc ctcgag 196

<210> 91

<211> 348

<212> DNA

<213> Homo sapiens

<400> 91

gaattcgcg cgcgctcgac ggggtgtgga aggagtgggt ggagctggcc tccctcagaa 60
 tcaagctggg ctcacttgtt atttaggagg tatgaagtgg ggaatcagtc tttgtctacc 120
 ttctgttccc tgcacccaga cctcctccac tttcttaggg taagaaatgc ctttgatagg 180
 ggtaaagcct ttctttccag agtttgagat cagagacttc aatatgcaaa gtcttggggg 240
 atgtgacag atcagcacac gtgcttttta tatttaaata attctcacia cctatgtggc 300
 ttgtcaggaa tgaagaatct aaagcttatt gtgctagggg cgtctcag 348

<210> 92

<211> 350
 <212> DNA
 <213> Homo sapiens

<400> 92
 gaattcgcg cgcgctcgac gtctaatttc cttagtgtt gataattttt tattacggtc 60
 tggagatttt atttaaaatt acttgtcaga ataattttga ggcttataat aaacatactt 120
 tacttttaag agcaaaagttt gcttctttac ccaggagcat tgtcagtcag ggaacaactt 180
 aaaccaagtt ccttgagaac acattctaaa ttttttagaa cagcatctta ataaacaaaa 240
 acaacactca cgtttcagat tttatatttt tgtttcccaa aggatttata tcaactgtatt 300
 tccaagtcac tgtcatgtta atgtctttca aatcaacatc tctgctcgag 350

<210> 93
 <211> 286
 <212> DNA
 <213> Homo sapiens

<400> 93
 gaattcgcg cgcgctcgac tttacatatt gtctattgtt gcttttacac aagaacagca 60
 gaggttgtga gttgcgacag agaccatatg gaccaccagg cctaaaatat ttactgtctg 120
 actctttaca gaaaaagttt atctggcctc tagtctaacc tatcaatttt aaaaaaacag 180
 ctttttgagg aaagaattca catactgtgc aattcaccca tttatatata attcaatggg 240
 ttttagtata ttcacagaga tgtgcaacca ccacccagtc ctcgag 286

<210> 94
 <211> 140
 <212> DNA
 <213> Homo sapiens

<400> 94
 gaattcgcg cgcgctcgac gcatgagcca ccattgcttg cccttttctt tcattctctc 60
 taattttttc gacattctcc taccattttt ctcttttctt gggccttcaa tttgtgcccc 120
 cctccacccc caccctcgag 140

<210> 95
 <211> 176
 <212> DNA
 <213> Homo sapiens

<400> 95
 gaattcgcg cgcgctcgac cgagtatttt actttattct ttttaagaaac tgagtcattt 60
 gtctgtttgt gtttccctt atctggattt tgtaatcata tcttggaatg tggtttcaga 120
 ggtgtctctg tcttttgat ttcattgtcag tttatactcc agtcgataag ctcgag 176

<210> 96
 <211> 601
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (191)

<400> 96
 gaattcgcg cgcgctcgac aaacaaaaga atcaaaactac gctaaattga ttgaaatgaa 60
 tggaggagga accggctgta atcatgaatt agaaatgatc agacaaaagc ttcaatgtgt 120
 agcttcaaaa ctacaggttc taccocagaa agcctctgag agactacagt ttgaaacagc 180
 agatgatgaa natttcattt gggttcagga aaatattgat gaaattattt tacaactaca 240
 gaaattaact ggccagcaag gtgaagagcc cagcttggtg tccccaagta cttcttgttg 300
 ctcatgtact gaaagactac tgagacaaaa tgctgagctg acagggcata tcagtcaact 360

gactgaagag aagaatgact taaggaacat ggttatgaag ctggaagagc agatcagggtg 420
 gtatcgacag acaggagctg gtagagataa ttcttccagg ttttcattga atgggtggtgc 480
 caacattgaa gccatcattg cctctgaaaa agaagtatgg aacagagaaa aattgactct 540
 ccagaaatct ttgaaaaggg cagaggctga agtatacaaa ctgaaagctg aaccgctcga 600
 g 601

<210> 97
 <211> 347
 <212> DNA
 <213> Homo sapiens

<400> 97
 gaattcgcgg ccgcgtcgac gaaggaacg ttcagctgga aactggagat aaaataaact 60
 ttgtaattga taacaataaa catactggtg ctgtaagtgc tcgcaacatt atgctgttga 120
 aaaagaaaca agcccgtgt caggagtag tttgtgcat gaaggaggca tttggcttta 180
 ttgaaagagg tgatgttga aaagagatat tctttcacta tagtgaattt aagggtgact 240
 tagaaacctt acagcctggc gatgatgtgg aattcacaat caaggacaga aatggtaaag 300
 aagtgtcaac agatgtcaga ctattgcctc aaggaacagg gctcgag 347

<210> 98
 <211> 351
 <212> DNA
 <213> Homo sapiens

<400> 98
 gaattcgcgg ccgcgtcgac cttacctgtc ctaggggagt aggcaagcac ttccactagg 60
 gagggggtgg gggaaaggaa tgacacatga catacatggc atacacatta agcagttgat 120
 catatgtctg actgggttcc agtttcttgg gaatgttggg ccccttgttc aggccttgc 180
 attttaaact aaaaatttca gtctattgtt tttagtaact tcatttatag tccctcataa 240
 caagttagaa ggatgtatct gctaccattt attcctataa ttttagaaag ttggggcttg 300
 acattatact catttagtga gagttagatgc aaaaaagtgc aggggctcga g 351

<210> 99
 <211> 446
 <212> DNA
 <213> Homo sapiens

<400> 99
 gaattcgcgg ccgcgtcgac gaagaaggaa ggcgcgagtg aggaaaggag gtactgtaga 60
 tgcctccaa atccttgggt atggaatatt tggctcatcc cagtacactc ggcttggctg 120
 ttggagtgtc ttgtggcatg tgcctgggct ggagccttcg agtatgcttt gggatgctcc 180
 ccaaaagcaa gacgagcaag acacacacag atactgaaag tgaagcaagc atcttgggag 240
 acagcgggga gtacaagatg attcttgttg ttcgaaatga cttaaagatg ggaaaaggga 300
 aagtggctgc ccagtgtctt catgctgctg tttcagccta caagcagatt caaagaagaa 360
 atcctgaaat gctcaaaaca tgggaatact gtggccagcc caaggtggtg gtcaaagctc 420
 ctgatgaaga aacctgacg ctcgag 446

<210> 100
 <211> 266
 <212> DNA
 <213> Homo sapiens

<400> 100
 gaattcgcgg ccgcgtcgac ccgtccctct acgcgttttg gtccctgttt ggtgctttct 60
 gtttgcagct acggcagtga gtatatctgg gcataggaac caatcagaaa caatcgcttc 120
 agcaatcaag accattgttc atcatggagg aacctatgga tacctctgag cctctatctg 180
 cattaccatt cactgggcag cagtcttttg agccaagtgg caaatttga cagtatccat 240
 cgatgcagat gaaccacata ctcgag 266

<210> 101

<211> 290
 <212> DNA
 <213> Homo sapiens

<400> 101
 gaattcgcgg ccgcgctcgac aaaaaagtta ctgtatttta gactaaatgg gaaagataag 60
 agatgatgct acagagtaat tcagaggcta aaacatgtag ggggtcttga ggccatattt 120
 ctttaaaaaa cagattaaaa aaacttattt tgggaaaaaa ctttcggaga tggccaaaga 180
 acatgacaac tgccatcata ccttcatctt gtattcattc attattaacg ttttccctaca 240
 tttgcttatt tctccgtata ggggtatttt tcaagactgc tgatctcgag 290

<210> 102
 <211> 234
 <212> DNA
 <213> Homo sapiens

<400> 102
 gaattcgcgg ccgcgctcgac gcagactgtg caagctccca gctgttcctt cttctgctgt 60
 ccctagccaa caaacacagt ggcatttaca acttttggca tatagaaatt atatgtaaaa 120
 attcaggtag tactatttct ttagtcctg ttagtcctt tctctctcta tatatatgta 180
 tctctggaca tgcattctct gttatatctt gaggtctttg ctgcaaccct cgag 234

<210> 103
 <211> 240
 <212> DNA
 <213> Homo sapiens

<400> 103
 gaattcgcgg ccgcgctcgac ggggccctgg tcacgcttga aaatgggtct actaagtaag 60
 ttccggatga aattaaagaa aacactcctt aggtccttct tttctgcttg ttcttggta 120
 cctacaatgg gaggcagactt aaggcaagat tcatcgggag ctacaggagg ttcatggga 180
 ggaaagtgg tggtgccagc agcttcaacg aagctccgtg catcccttct tcccctcgag 240

<210> 104
 <211> 154
 <212> DNA
 <213> Homo sapiens

<400> 104
 gaattcgcgg ccgcgctcgac cgtcgattga attctagtcc tgtttctttt cctccccaac 60
 aaacaccgtg ttccaagaaa tgccaagcct gaagaagaat gaaggtaggt ctgaaatttt 120
 cagaggccca agcaagactc tggaatctct cgag 154

<210> 105
 <211> 273
 <212> DNA
 <213> Homo sapiens

<400> 105
 gaattcgcgg ccgcgctcgac ggtgttaggg gtttaaggg agttgactga ataaggtaaa 60
 gatctgctgg tcttgaaaat gaaacatctt cattatttca aatgtgtaac aactactgct 120
 tgctatttgg cactatctgc ttctgtgctt catattaaat cctttaactt gcttcaatgt 180
 gcatgtgctg gattgagagc cacttttgtc cccctgggccc cacaggaggg tcccggcgag 240
 gacccccgcc ctctggctcc cggggcgctc gag 273

<210> 106
 <211> 262
 <212> DNA
 <213> Homo sapiens

<400> 106

```

gaattcgcgg ccgcgtcgac gtggcctggg ctcttaatac| aggtaaattg tctccaaagg 60
actagtaaag gtgactgggt catctctctg ccccagggac actgattaga gaaaatccgt 120
ctgtgctggc aatacggcag tgctggacac tcggaattcc| cttgaaggca aaagcaagga 180
acagagcgtg attaggtact ggacacctgc caagtgtctg gctctctcca gtttacagat 240
gaggaaactg aggtcctctg ag
262

```

<210> 107

<211> 259

<212> DNA

<213> Homo sapiens

<400> 107

```

gaattcgcgg ccgcgtcgac tgatggtata agtatttacc tgggacaagg ggcttctcta 60
tttggctaaa ttatctaaaa tgcataggaa gaatagaact tttagtggc tatttttctt 120
ttatctatct atctatctat ctatctatct atctatctat ctatcatctc gttctattgc 180
ccagactgga gtgcagaggt gcaatcatag ctcaactgcag cctagaactc ctgggctcat 240
gcaattgtct cacctcgag
259

```

<210> 108

<211> 260

<212> DNA

<213> Homo sapiens

<400> 108

```

gaattcgcgg ccgcgtcgac ggttttacca tcctggctaa cacggtgaaa ccctgtctct 60
actaaaaata caaaaaatta gctgggatta caggcgtgag ccaccgcgcc cgcccaaat 120
aaaattttta aaaggatatt tacatcagtg tagtatgtga agtaacaag aaaaagataa 180
aactcacttt ttaagtaaaa acagtcagtg gcttgaagta tgttgtaatc tttatcagaa 240
aagtatggga aggactcgag
260

```

<210> 109

<211> 255

<212> DNA

<213> Homo sapiens

<400> 109

```

gaattcgcgg ccgcgtcgac ttggattaca ggtccctgct gccacgcca gctaattttt 60
gtatttttag tagagatggg gtttctccat gttggctcag ctagtctcga actcctgacc 120
tcagatgatc tgccagcctc ggctcccaa agtgatggga ttacaggcat gagecattgc 180
gcttgcccca ggacatttat ttttattgct aaatacattt cagtcattta tgtatttgtt 240
ttctccccc tcgag
255

```

<210> 110

<211> 423

<212> DNA

<213> Homo sapiens

<400> 110

```

gaattcgcgg ccgcgtcgac tccttctag ccttggtcgt cgccgccacc atgaacaaga 60
agaagaaacc gttcctaggg atgccgcgc cctcggcta cgtgccggg ctgggcccgg 120
gcgccactgg cttcaccacg cggtcagaca ttgggcccgc ccgtgatgca aatgacctg 180
tgatgatcgc ccatgcaccc ccaggcaaga gaaccgttgg ggaccagatg aagaaaaatc 240
aggctgctga cgatgacgac gaggatctaa atgacaccaa ttacgatgag tttaatggct 300
atgctgggag cctcttctca agtggacct acgagaaaga tgatgaggaa gcagatgcta 360
tctatgcagc cctggataaa aggatggatg aaagaagaaa agaaagacgg gagctatctc 420
gag
423

```

<210> 111

<211> 203

<212> DNA

<213> Homo sapiens

<400> 111

```
gaattcgcgg ccgcgctcgac attacctcat aagcattaac aaatcaggcc caaagagcgt 60
aagtcctaga aatttgTTTT aaagcagccc tagtcatggt gctgggtgcta ccgccttggt 120
ttaggagcct gcctcctgtc agtatgaaac cctcacctga aaaatgccag cctggacacc 180
aaacactgag ccccttctc gag 203
```

<210> 112

<211> 257

<212> DNA

<213> Homo sapiens

<400> 112

```
gaattaagaa ttgcggcgcg cgtcgacaaa aaaaaaaaaa aaaggatacc aaaattctca 60
agtcaaatta taagggtttt aacattccca ttctacacc acgtgcaaga aaaacaaaat 120
ccttgTTTT gcctcctctt tatggtcctg tctcattttc agcccccttt cctcattcta 180
ctctattaat tatgccttta tatggatgca aacttgtaaa atatgtggcc tattttgtgt 240
gtatacgtgg tctcgag 257
```

<210> 113

<211> 348

<212> DNA

<213> Homo sapiens

<400> 113

```
gaattcgcgg ccgcgctcgac gttggaggag gaggaagagg aagtcgaaga ctgtggcttc 60
ctttttttgt tacttgagga ctcgtcgcta cgggtggaca ggtctttgac ttttgaggat 120
ttgctggttt tgggttttga tggcttggtg gatggggaag ggatgacggc tggatcggg 180
gacacggcgg atggggcctt gaagggttgag tccatgatgc tgagggttgc ggccacatga 240
gggaaaagctg tgggtgtggga catgagggcg ctcgggtccg gcgatgtcac gaaagctgcg 300
tttgagagca tggctgatgt catcatgtaa gaagagggtga gcctcgag 348
```

<210> 114

<211> 303

<212> DNA

<213> Homo sapiens

<400> 114

```
gaattcgcgg ccgcgctcgac gggattacag gcataagcca ccgtgcccgg cctgtagatt 60
tcatttttag aaggtttgct tttaacagtt taaatttgta actcacataa aaaaaactta 120
ttataagaaa gagaaactag gtgttaggat aagtaaaaca ataagcattt ttgtctcttc 180
tgtttttgta gattttaatt gtttaactta ataaaatcac attaatggg gttcaactac 240
ttcacatttg taataacttt ggggtgttaa attgagatga aattcatcag gggaaaactc 300
gag 303
```

<210> 115

<211> 214

<212> DNA

<213> Homo sapiens

<400> 115

```
gaattcgcgg ccgcgctcgac aaaaaagaaa ggaagtggca tatttggtaa attgataaat 60
taccactgtc aaatttatatt ggtgagtcta tatctattgt tgccccaga tggtgcttt 120
gcaagaatta gtgtaaaatt ggaaaaaata ctcaatgttg aaagctgtca ttgttgagat 180
ctttatgaaa ttattgtgcc catgtccgct cgag 214
```

<210> 116

<211> 230

<212> DNA

<213> Homo sapiens

<400> 116

gaattcgcg cgcgctcgac tgcagatttt tctcttcacc tcatcaacag gtgatatagc 60
ccttttggtt gcttggtctt aagtacagtt cttagattca gctcctctac ttgttcaagt 120
ctaaatacta ttcctcagtg atgctgataa ccagcaaagt tttagtttct atgttgggca 180
tatttttggg gcagccctgt aaggatgtgc tccatggtac aagactcgag 230

<210> 117

<211> 195

<212> DNA

<213> Homo sapiens

<400> 117

gaattcgcg cgcgctcgac attaatTTTT cctgagagca gtagacttga ttagatgccc 60
tttttagtg tcatcaaate ttagattatg agctcaaaga ttttatctct atatacacia 120
tttctaatat taaaaaaat agtcgggccc ggtgcggtgg ctcaggcctg taatccagca 180
cttaaggggc tcgag 195

<210> 118

<211> 460

<212> DNA

<213> Homo sapiens

<400> 118

gaattcgcg cgcgctcgag aagatcctat tcaagagctg accatagaag aacatttgat 60
tgagagaaag aagaaattac aggagaagaa gatgcatatt gcagccttgg catctgccat 120
attatcagat ccagaaaaata atattaaaaa attgaaagaa ttacgttcta tgttgatgga 180
acaagatcct gatgtggctg ttactgttcg aaagctggta attgtttctc tgatggagtt 240
atttaaagat attactcctt catataaaat ccggcccttc acagaagcag aaaaatctac 300
taagaccgga aaagaaaccc agaagttaag agaatttgaa gaaggcctgg ttagccaata 360
caagttttat ttggaaaatc tggaaacaat ggttaaagat tggaaagcaga ggaagctgaa 420
gaaagtaat gtagtttctt taaaggcata cggactcgag 460

<210> 119

<211> 239

<212> DNA

<213> Homo sapiens

<400> 119

gaattcgcg cgcgctcgac cagacagatc aaatggaaag gctcccccat cctgtcctct 60
acaccacctt gcagctgggc ctcagcaact gggcttttaa tttcagtcta attcaagtca 120
gcagcatagg gcagctcctg ggaaattggt ttacacatgc ggacaagccc agtagccag 180
agctaaccac ctcaccatcc ctgaccacag aggagcagat aaggaagcaa gaactcgag 239

<210> 120

<211> 191

<212> DNA

<213> Homo sapiens

<400> 120

gaattcgcg cgcgctcgac tgggcatcat ctccataatc ttttcataaa gcatcaatga 60
tttcattatt cctctacca aactttacaa gaagtatttt tttttttgag ccagtatctc 120
gctccatcac ccatgctgga atgcagtggc atgatcatag ctcactgcag cctcaacctc 180
ccaggtctga g 191

<210> 121

<211> 227

<212> DNA

<213> Homo sapiens

<400> 121
 gaattcgctg ccgcgctcgac tttcttttga tcactatgcg gtgtcactat gtggtagtag 60
 cgaggtcaga ctgtagcgag tgtttaaagt ttgcttccct tgttttctgg gcttgtgggg 120
 ctttttggg tacctgccct agcctagtca gtcattcccc atgctgcccc cttaggctag 180
 agatgcccta ccgccctcag gcctcgctga atgtgccaaa cctcgag 227

<210> 122
 <211> 166
 <212> DNA
 <213> Homo sapiens

<400> 122
 gaattcgcgg ccgcgctcgac tgactcatag tcaagaccct ccaccagtaa catatattgg 60
 cgagccagcc aggagaccac tacaggaaac actccattta ttccacctga cttccactt 120
 ggctgcattc tcaaccattg aaatgaattt gacctgata ctcgag 166

<210> 123
 <211> 223
 <212> DNA
 <213> Homo sapiens

<400> 123
 gaattcgcgg ccgcgctcgac ctaaaacccc agaatacatta ttgttgcatc tctttatatt 60
 ccatctaatt attcatcaaa tagcagtaat gctttctttg aaatgtcttc tatatatctt 120
 tgttttctgt tctgcttttc atctctctat ttctgttctt tccccctccc cttctctcga 180
 tttacttcta acagctttat gtccctttca gtcgaccctc gag 223

<210> 124
 <211> 178
 <212> DNA
 <213> Homo sapiens

<400> 124
 gaattcgcgg ccgcgctcgac cagactggca acaaaccttt gagtgagtgt taagatacaa 60
 gaaaccctaa aagttcctag gagaaatgac tttaaactta gaattccctt ttttaatttg 120
 gtccacacag ggtctcactt tgttgcccag gctgctgtac aatggcccag atctcgag 178

<210> 125
 <211> 226
 <212> DNA
 <213> Homo sapiens

<400> 125
 gaattcgcgg ccgcgctcgac agaaaagcac aaattagttt taagtgaaaa gttgaaaagt 60
 aagtcagata aattaacatt caccatttgt ttttttttaa taaaggtaaa aatcactaaa 120
 ataaacagcc cactttaaca aaaaataggt gcaataaaac tataaaagag aaagcaaggg 180
 agtgaatgaac agagggttga gggatgatgat acggaggata ctcgag 226

<210> 126
 <211> 220
 <212> DNA
 <213> Homo sapiens

<400> 126
 gaattcgcgg ccgcgctcgac gtttcaaagc cgtagacacc ttttattcag ggctggtaag 60
 cttcactggg gtttttgggc tcctgctttt tttttttttt ttaaactctga ttacaatggg 120
 gttgcacact gttgtggttt atcgtttttt agtgatcctg ttgctcaata accctccagt 180
 gctctgctct gaaacagcac cagaacccca cccactcgag 220

<210> 127

<211> 216
 <212> DNA
 <213> Homo sapiens

<400> 127
 gaattcgcgg ccgcgtcgac tcgtccagta ccagtgccac gcagtttaaa tagtgatatt 60
 tcctattttg gtgttggggg caagcaagct gtcttctttg ttggacaatc agccagaatg 120
 ataagcaaac ctgcagattc ccaagatgct cacgagcttg tgctttctaa agaagatttt 180
 gagaagaagg agaaaaataa agaggcagct ctcgag 216

<210> 128
 <211> 180
 <212> DNA
 <213> Homo sapiens

<400> 128
 gaattcgcgg ccgcgtcgac gcaaactagt aagtatgagg ttttcagctt caaatacaaa 60
 accgtaattga tactagctga cattattgag tgcattcaga atacttttagt ggacttttta 120
 taagaattat taatatattc caaaggatta ggaatgttac ttttcagctt ctccctcgag 180

<210> 129
 <211> 204
 <212> DNA
 <213> Homo sapiens

<400> 129
 gaattcgcgg ccgcgtcgac ttcctctcct ctctctcttg ccatttttagc gtgcatgatt 60
 tcattttttt tgttggcacc tgtaaggctg tatctttttc ttgccagacc ttgggttatg 120
 gttacatctt cccattgctc attgccacc ctccagttgg cacctctggt gcgctcctgg 180
 ctgggtgaag ccgggcctct cgag 204

<210> 130
 <211> 237
 <212> DNA
 <213> Homo sapiens

<400> 130
 gaattcgcgg ccgcgtcgac ctgagggatg ctcatcttta acagtctccc tcatgtactt 60
 ttgctgtttt acacagagaa acaggtagac cccacagagg agaaggagg gattcaacag 120
 ctttattgtc tggaagcagt gagatttggg gattgtctgg ggggattcct ggggttccct 180
 gggtagcctg ttccaggcag tcagtccatt tgccttctta gtacaagccc cctcgag 237

<210> 131
 <211> 250
 <212> DNA
 <213> Homo sapiens

<400> 131
 gaattcgcgg ccgcgtcgac cttgtagata ctttttgaat ttaatgtcgt tagaattgct 60
 tcttttttta atgctctatc taggtgaaag atatgatcct gagcccaaata caaaatggga 120
 tgaggagtgg gataaaaaca agagtgcctt tccattcagt gataaattag gtgagctgag 180
 tgataaaatt ggaagcacia ttgatgacac catcagcaag ttccggagga aagatagaga 240
 gactctcgag 250

<210> 132
 <211> 258
 <212> DNA
 <213> Homo sapiens

<400> 132

```

gaattcgcg cgcgctcgac atttatttaa ataatatagt tccatatttt ttagtatatt 60
tacagagttg tgtaaccatt accacaatct aattttggaa cactgtcttg gtcctgaaa 120
gacccctgcaa accattagca gtcacttctc atttctcttt tccccagccc ctggcatcca 180
ctaactact ttagtctct atggatttgc ctactctggt tgtttcagat aacatttga 240
ctttgtgaca gactcgag 258

```

<210> 133

<211> 139

<212> DNA

<213> Homo sapiens

<400> 133

```

gaattcgcg cgcgctcgac ctttcccaaa attcagaagt taatgggctt ttagtgtttt 60
ctatattttt tttatttcaa tgatttggcc tgtctatgtt aggctaaaaa ataacctgt 120
gtatgctacc aacctcgag 139

```

<210> 134

<211> 201

<212> DNA

<213> Homo sapiens

<400> 134

```

gaattcgcg cgcgctcgac ggagaagtaa gaattgtaag ggagggttcag tagtggggaa 60
ttctgtgaca gctgattgaa gatgatgatg aagaacctct gcattctagt taccctttgc 120
ttcccttcac ctcttgtaaa atttggcttg gcaacaatga cattgtcatg cttattgtcc 180
caatatccat ccaatctcga g 201

```

<210> 135

<211> 132

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (84)

<400> 135

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gaattcgcg cgcgctcgac ctgagggttg tctaagagga aacccaaaaa gagctggaag 60
agaacaagcg atccctggct gcantggatg cactcaatc tgatgatgaa aatgatgagg 120
agggctcctg ag 132

```

<210> 136

<211> 190

<212> DNA

<213> Homo sapiens

<400> 136

```

gaattcgcg cgcgctcgac agaagacata ctaatagaac tccttgcttt taattgggga 60
aatagggtt taataatttt gacctcaact aaaaatgata tgcaatagtc tctgtgtgtg 120
tttgaaatac attgtgttct cagagatttc tacattctca cgttctagt atttggggca 180
tagactcgag 190

```

<210> 137

<211> 220

<212> DNA

<213> Homo sapiens

<400> 137

```

gaattcgcg cgcgctcgac atcacaatga gaccgttggc ttggaatttg agtcgttgg 60
tcccatgggt agatgcttgt taagacttta tacttgggtc aatctctcac tttattttgt 120

```

agaaccattt gaaatcctag gatgtgcttg ttctggaagg atgacatggg cccagactga 180
acaagtcagc ttgatgatct taaatgatgg gcaactcgag 220

<210> 138
<211> 156
<212> DNA
<213> Homo sapiens

<400> 138
gaattcgagg ccgcgtcgac tgcatttttt ggtatattaa tcttgtatcc tgtaaccttg 60
ataatgcatt tattagttca tagtgttttt tgcttttttt gttctttttt ggtaaatgcc 120
ttaggatttt cttttttctc cgactccccg ctcgag 156

<210> 139
<211> 239
<212> DNA
<213> Homo sapiens

<400> 139
gaattcgagg ccgcgtcgac ctgaaaataa ggaaaatgtt agggacaaaa aaaagggcaa 60
catttttatt ggctctgtgg atgagcgccc ctgtttgttc ggacaaggcc gaaggaagca 120
gcagctctac tggctgcagg cttgacatcc gggtttctag ctctgaacga gaagcagagt 180
cctggaaact atcaaacaca acctcgcccg tggcaggctg cactcccaca atgctcgag 239

<210> 140
<211> 169
<212> DNA
<213> Homo sapiens

<400> 140
gaattcgagg ccgcgtcgac cccgcctcaa cctcacgagt aagctgagac tgcaggctcc 60
accacaccca gcgaatttat ttatttttgg agagatgagg ttccaccttt ttgccaggc 120
tgggtctcaa ctctggcct caagtgatct gaccaccagc ggccctcgag 169

<210> 141
<211> 222
<212> DNA
<213> Homo sapiens

<400> 141
gaattcgagg ccgcgtcgac aaaacgcctt atgatgaatc taagtcttat attggctgtg 60
atctttgtac taactgggat catggagaat gtgttggcat cacagaaaag gaggctaaga 120
aaatggatgt gtacatctgt aatgattgta aacgggcaca agagggcagc agtgaggaaat 180
tgtactgtat ctgcagaaca cttatgatg agtcacctcg ag 222

<210> 142
<211> 198
<212> DNA
<213> Homo sapiens

<400> 142
gaattcgagg ccgcgtcgac tgccaaattt tttaaatctc gaaattggtc ctaaaagaga 60
cttcataat catctgggtc aatgagagat ctttttactt tatttattat tttattttat 120
ttattttatt atttatttat ttttgagatc gtgccattcc actccagcct gggatgataa 180
gctggactcc gactcgag 198

<210> 143
<211> 238
<212> DNA
<213> Homo sapiens

<400> 143

gaattcgagg ccgcgtcgac tattcttgc ttgctggagg cagatctgaa ggaatgcac 60
 tctctgttg cttcttctag tgggggtcc cgaagcctgg cttccccagc cgatgtgctg 120
 ctttagtcag cgtctgccct ggtccttcgg ttgcagggct cacacgcttt ttgggttgt 180
 gtcccttttg actgcagagg ctacgtgtcc tgtgaccaac cacggaggcg gcctcgag 238

<210> 144

<211> 151

<212> DNA

<213> Homo sapiens

<400> 144

gaattcgagg ccgcgtcgac ctaaagtcga gtgtttccag agacttttga aagtcactt 60
 acactttttc cttcttcatt cacaagctc ttcttccctg ggccctggta tgtatgcctt 120
 tctctcctac tgtctaatag cgagcctcga g 151

<210> 145

<211> 186

<212> DNA

<213> Homo sapiens

<400> 145

gaattcgagg ccgcgtcgac caggatgttc ttctatccc attcatctac cttggtgttt 60
 ctttgtcttg cctccttgc ctggtgtgc gagcaatatg gggcaccttc atttctgcag 120
 tcagaggggt ggccactggg aatgagaaga accacctctg taccttggga tgctgtgtca 180
 ctcgag 186

<210> 146

<211> 460

<212> DNA

<213> Homo sapiens

<400> 146

gaattcgagg ccgcgtcgac gggctcctgaa gccctctgtc tacctgggag accagggacc 60
 acagggccta gggatacagg gggccccct ctgttaccac cccccacct cctccaggac 120
 accactaggt ggtgctggat gcttgttct tggccagcca aggttcacgg cgattctccc 180
 catgggatct tgagggacca agctgctggg attgggaagg agtttcaccc tgaccattgc 240
 cctagccagg ttcccaggag gccacacat actcccttc agggccaggg ctccagcaag 300
 cccagggcaa ggaacctgtg ctgctgtctg gttgagagcc tgccaccgtg tgcggggagt 360
 gtgggcccagg ctgagtgcac aggtgacagg gccgtgagca tgggcctggg tgtgtgtgag 420
 ctcaggccta ggtgcgcagt gtggagacag gattctcgag 460

<210> 147

<211> 244

<212> DNA

<213> Homo sapiens

<400> 147

gaattcgagg ccgcgtcgac caccttccat ccattttccc agtcagaaa ttaggagtt 60
 atctctgatt ccttctttat tcttaatccc attttccata cataatcaag ccctgggtc 120
 agtcagttct tgcgtcccaa gatttctcaa ttctgtctgt ttgccatatg tgaatcatat 180
 gctactgtgt tacctttgca ttagtcttag ttttccattt aaatatattc agtgtgagct 240
 cgag 244

<210> 148

<211> 165

<212> DNA

<213> Homo sapiens

<400> 148

gaattcgcg cgcgctcgac atttcatgaa cttaggatgt gttttttatt catgaaaaac 60
 ttagaatagt gaactattaa tatttaaaaa cgagaaatac aacatttaaa aaattaagag 120
 tattttgcat tagtgattat gattcttata ccaaaattcc tcgag 165

<210> 149

<211> 252

<212> DNA

<213> Homo sapiens

<400> 149

gaattcgcg cgcgctcgac gaagcctcat tggagcagat tgctttaaaa tctttttcct 60
 tctaatttca ggattggcat ctctgtctt tttcctgctt cttggcattt tagcatatct 120
 ccagtagggg gtcctcgaat tctgaatacc aatttacgcc aaattatggg cattagtgtc 180
 ctggctgctg ctgtttcact tttatatttt tctgttgctc taatccgaaa taagtatggg 240
 cgagatctcg ag 252

<210> 150

<211> 136

<212> DNA

<213> Homo sapiens

<400> 150

gaattcgcg cgcgctcgac agacattggt ctttagccat tgtatcttta atagtctttt 60
 aaacacattc atctctgggc taaaaatgct ttttaaaaa accaaaaaga gtacttttct 120
 agaagcattg ctcgag 136

<210> 151

<211> 188

<212> DNA

<213> Homo sapiens

<400> 151

gaattcgcg cgcgctcgac cccaacctga agctgaagaa gccgacctgg ttgcacatgc 60
 cgtcggccat gactgtgtat gctctgggtg tgggtgtctta cttcctcctc accggaggaa 120
 taatttatga tgtttattgt gaacctccaa gtgtcggttc tatgactgat gaacatggac 180
 acctcgag 188

<210> 152

<211> 181

<212> DNA

<213> Homo sapiens

<400> 152

gaattcgcg cgcgctcgac atttttactg caagttaatg ctggaaaaac agggcaattt 60
 ttcacagaga gaacatccta ataatatcag tttagtacaa aatagcggca tcttagtgaa 120
 ccttgtatct ttcctttttg ttgcagttgt tgctagaaaa cataatcgga aggacctcga 180
 g 181

<210> 153

<211> 251

<212> DNA

<213> Homo sapiens

<400> 153

gaattcgcg cgcgctcgac caacctctg gcttagtaag ttgtggtttt tctgaccttt 60
 ttaaagtttg agaggacatt ttatttatat taaccaattt atttgaattt cagtctcaga 120
 agtattaaat attagtctcat aagattgtta atctgctggg tcaggcaa acagaagagt 180
 ttttcacttt attcttgatt attttactta tgatcatttc caatttagtt ggggtaataa 240
 cctgcctcga g 251

<210> 154
 <211> 224
 <212> DNA
 <213> Homo sapiens

<400> 154
 gaattcgcg cgcgctcgac atttggtgag ttttgaccac tgcgcctggc tcatattttc 60
 tttatatatc aaaacaattc agcttgcttc acttttatga aagctttatt atgagtttga 120
 aagcaattct gcattttctt aacattgtaa ctggtgttga gttgaaggca ggcccttggg 180
 agccctttgt gggcaattcc ctccactctg gaggtgcct cgag 224

<210> 155
 <211> 145
 <212> DNA
 <213> Homo sapiens

<400> 155
 gaattcgcg cgcgctcgac ctgtcttat tcttgatttt aggggtgctca ctcttagtct 60
 tttgccatta tattgtttta tgttggtttt ccataacctc actatgctga atagcagttt 120
 ggcactctgt ctggtcgttc tcgag 145

<210> 156
 <211> 163
 <212> DNA
 <213> Homo sapiens

<400> 156
 gaattcgcg cgcgctcgac cagctatttt attttaaaag ccaaaatatt tttaaactag 60
 ttttaaaatt tgacgctttg aatagataac acttttacat ggttcaaaaa taatataaag 120
 agctatacat tgaaaaatgt tgctccact cctgttccctc gag 163

<210> 157
 <211> 197
 <212> DNA
 <213> Homo sapiens

<400> 157
 gaattcgcg cgcgctcgac agagcttact gagttaattg ccaggagatg tatctaagtc 60
 agagggttga gttgctcttc tgtgttttgc tgggttcgtg cagagctgct tttgtaccag 120
 gtttctacca ctgggggtgc tttttgcttt tcttttctact tcccacatct caagcacctg 180
 ctgcgggtca gctcgag 197

<210> 158
 <211> 255
 <212> DNA
 <213> Homo sapiens

<400> 158
 gaattcgcg cgcgctcgac ttaaaaaattt gtgaagcgtc gcataattttt tcagttattt 60
 tagtattaac aaacaaattg aagatcattg gtttatataa cccctgaga gactaatagt 120
 agaatagaac agaataatag aatagaatag aacagaatag aataatagaa tagaattata 180
 ggtatgagcc gtggtgcctg gcctctaata gtttttttgt tgtgtgtgtt gttgtttttt 240
 atggcttccc tcgag 255

<210> 159
 <211> 150
 <212> DNA
 <213> Homo sapiens

<400> 159

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gaattcgcg cgcgctcgac tggagtggga tgggaatttag caaaggtaca tagaacaaca 60
gtgatcacat tgcttaagag tttctggttt tttttgtttt ttgtttttt tgagatggag 120
tcaggctctg tcgcccaggc tggactcgag 150

```

```

<210> 160
<211> 114
<212> DNA
<213> Homo sapiens

```

```

<400> 160
gaattcgcg cgcgctcgac cttattccaa cattttcttt aaaacaccag caaacgtatt 60
tgtgaatctc tcttatecct gaaacttctt atgctgttga taaacttact cgag 114

```

```

<210> 161
<211> 166
<212> DNA
<213> Homo sapiens

```

```

<400> 161
gaattcgcg cgcgctcgac ctatgaatca cgatactacg atgatcctcg ggaatacagg 60
gattacagga atgatcctta tgaacaagat attagggat atagttacag gcaaagggaa 120
cgagaaagag aacgtgaaag atttgagtct gaccaggagac ctcgag 166

```

```

<210> 162
<211> 182
<212> DNA
<213> Homo sapiens

```

```

<400> 162
gaattcgcg cgcgctcgac attctttgtt accctttaca agtataagtg tttacaagta 60
taagtgttac cttacatgga aacgaagaaa caaaattcat aaatttaaatt tcataaattt 120
agctgaaaga tactgattca atttgtatac agtgaatata aatgagacga cagcttctcg 180
ag 182

```

```

<210> 163
<211> 217
<212> DNA
<213> Homo sapiens

```

```

<400> 163
gaattcgcg cgcgctcgac cttttttctc tctctctttt aaataaacac aagcttcaaa 60
taagcacaca ataagtctgg gcaagcctac tgggatttgg gattctctag ttagttttct 120
ttgcctaact gagatatcta tttcatacta ctcttcattc cccaaatata tcattcccct 180
ctctacctcc cctcccagct gccccacaa cctcgag 217

```

```

<210> 164
<211> 165
<212> DNA
<213> Homo sapiens

```

```

<400> 164
gaattcgcg cgcgctcgac gcacaatagc agtttctaag caatgaatga gaggacacgt 60
atgttggtga ctttgttgtt tctcttcac cctccaataa ataaaaccga gagttttgtg 120
gacagggatt tattagagtt tcatacttta gttgacaggc tcgag 165

```

```

<210> 165
<211> 227
<212> DNA
<213> Homo sapiens

```

<400> 165

gaattcgcgg ccgcgctcgac tcgtgttaat aactttttgc tttgttggat tgtttcttta 60
 ggatacattt ccagacatat acttagaaca tcaaaaacgt atggacatct ttttgatttc 120
 tcatgtgtta tattatgtcg catgtgttat gttatatgta tatatatata tgtataaacac 180
 atatatatat gtcattgtgt atattatgtg ggggggaaaa actcgag 227

<210> 166

<211> 211

<212> DNA

<213> Homo sapiens

<400> 166

gaattcggcc aaagaggcct agtttatgaa acttaccaga aaataaaagg accaatctaa 60
 aataaagaat ctctattgta tttttctact gacaatgcaa atgcttatct taaaacatct 120
 aattttttcc cctttttcac aggcaagcac aactgtaaca cttccagaat ctcagttcct 180
 tgccagttgt cattctgaag catcctcgag g 211

<210> 167

<211> 218

<212> DNA

<213> Homo sapiens

<400> 167

gaattcggcc aaagaggcct agaattaaaa cccataatct atatcttagc taagatagga 60
 aaaatttact aaaatatatt tttctggttg aatttcagat ttctctata actctgcaca 120
 ccagaaaaaa atctatagta caaatacaga tgaaattcca tcaactgttt catttttttt 180
 taattttttt taatcttgtt cagggcatac atctcgag 218

<210> 168

<211> 238

<212> DNA

<213> Homo sapiens

<400> 168

gaattcggcc aaagaggcct aaagccaggt aaaaatttta aaaaagatga aatcctttct 60
 ggcttctgcc agaggctctg cattcttcat atctctgttc ctcatcagtc actgcaaagc 120
 tgatcagaca gattggcatg gtgttcagca ttttgagttc cagactctgg cgatgggaga 180
 taggtcattt ggaatttttc cctcatcccc tcctcaaac caaatcagaa atctcgag 238

<210> 169

<211> 265

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (31)

<400> 169

gaattcggcc aaagaggcct aggttgatta natattttgg ctattgtgaa tagtgctgca 60
 gtaaacgtga ggggtcccat atctctttga taaactgatt tcctttcctt tggatagata 120
 cccagtagtg ggattgctgg atcatatggt agttctattt atagtttttc tttttttttt 180
 gagacggagt cttgctctgt caaccaggct ggagtgcagt ggcattgatct cagctcactg 240
 caacctccgc ctcccggggc tcgag 265

<210> 170

<211> 230

<212> DNA

<213> Homo sapiens

<400> 170

gaattcggcc aaagaggcct aggatattcc agcaaagtct ctaactgcag cctgtagaca 60
 atttgctatt aaagattcag tgcacaaaat atagctaaca gcttttaaat ttttactttt 120
 aaccagtctg gggatttgct tgcctgggtga gtctcatatg ccatattatg aatatgaaaa 180
 taatgaagtt aatttcctgt tgcctttctg tgtcagccac aaacctcgag 230

<210> 171

<211> 293

<212> DNA

<213> Homo sapiens

<400> 171

gaattcggcc aaagaggcct aggaatggct tgatgggtgc aggctatgct gtgactgggg 60
 ctgtcctggg ccaagacagg ctgatcaact atgccaccaa tggtgccaag ttcttgaagc 120
 ggcacatgtt tgatgtggcc agtggcggcc tgatgcggac ctgctacacc ggccctgggg 180
 ggactgtgga gcacagcaac ccacctgtct ggggcttcct ggaggactac gccttcgttg 240
 tgcggggcct gctggacctg tatgaggcct cacaggagag tgcgtggctc gag 293

<210> 172

<211> 139

<212> DNA

<213> Homo sapiens

<400> 172

gaattcggcc aaagaggcct agggattttt tactagtgat ttaatgttac tacttggtat 60
 tggctctgtc aggcctttct tcttctgat tcaagctggg cagggtgtat gtttcagga 120
 atttaccatt tcctcagag 139

<210> 173

<211> 149

<212> DNA

<213> Homo sapiens

<400> 173

gaattcggcc aaagaggcct agtgagagtg acatcatgca ggaattactc gtattgaaca 60
 cactttttct agatattctt ccaatccccg acgtcgggca tctaattgtt gttctgataa 120
 tgaaaatggc cactcccccg ggactcgag 149

<210> 174

<211> 209

<212> DNA

<213> Homo sapiens

<400> 174

gaattcggcc aaagaggcct actcgaagtt cctcaaatac accaaagact ttcttggcct 60
 aaataatttt tatgtatcta tttctgcatt ctacagctttt ctttttcctt ttatctaccc 120
 aaccaaattc ttcaaggctt agtgaaaatg atttccttcc tgaggtcagt ccttgcccaa 180
 aaagatccct cacatcctct aaactcgag 209

<210> 175

<211> 223

<212> DNA

<213> Homo sapiens

<400> 175

gaattcggcc aaagaggcct aatcatatta taactgatta gacaaaatgt ggcattattg 60
 tttttatttc ttttgtgtt tacaaggctt cactctgttg cccaggctgg agtgcagttg 120
 tatgatctcg gctcactgca gcctggacct cctaggctca agcaatcctc ccacctcggc 180
 cccccacata gctgggacta cagggtgcagg ctatcgactc gag 223

<210> 176

<211> 151
 <212> DNA
 <213> Homo sapiens

<400> 176
 gaattcggcc aaagaggcct agtttcttga atgtaacatg acattttctca ttccataacc 60
 ttcatattatg ttgtttatct ttggaatgct ctctcttcat tttgatgctt cacacgctaa 120
 tacacatcct tcaagaccca attcactcga g 151

<210> 177
 <211> 327
 <212> DNA
 <213> Homo sapiens

<400> 177
 gaattcggcc aaagaggcct aaacataatt agttgtttat atacttctctc tttaaatccca 60
 gagttcgatt tacaaaatat ttgattgctg tttttgtata ttatctcagt gctctaaaat 120
 taccctagca aacgtgcagg aatgggtgta ggccccctaa ataaaaatgg aattagttat 180
 gttgggtttt ttttttttgc tgtttcactg ttacaattcc ccactgtcaa aggtcattc 240
 cacaattttg tgggattagg gacaatggga tgtcatctct cagctggcta cttcttgccg 300
 aacagggtca acgcggggca actcgag 327

<210> 178
 <211> 500
 <212> DNA
 <213> Homo sapiens

<400> 178
 gaattcggcc aaagaggcct agaggggggc tgcgaggtat actgctctcc tctctgggat 60
 ctgtgagtaa tacactacct ctgctatttc atgcacccct gctatttcac gttgectcct 120
 ctgtgtctca cctgcccagc acacctgaat ctacagtatt tcttggtcag ggcattccta 180
 gagagtggct atcttggttag gaataaacca gaaacaggtc agacaagagc cccaagagtg 240
 tctgtcaata taatcaagtc cttatgagag aggacatctg gtcacaggtg gacacttagg 300
 cattaggcct tccaccagaa agaagtatcc caagaaaggc aactgcaga cagccacgac 360
 cacctccctt gcatcagagc agggctagag tttatagcca cttctagag agagctcaag 420
 aactaattag aaagaaaaaa aaatacaaca cacttgctca tgttaaaact gggatttggg 480
 cccatgccat ctggctcgag 500

<210> 179
 <211> 226
 <212> DNA
 <213> Homo sapiens

<400> 179
 gaattcggcc aaagaggcct agttgagggg aggttggttt catggtttta cttttgggtt 60
 tttgaggact atgtttgttt ttatttttat tttttatttt tttatttttg agacagaatt 120
 ttgctattgt tgcccaggct ggagtgcagt ggcacgatct cagctcactg caatctccgc 180
 ctcccagggt caaactatct tctgctctca gcctcccaag ctcgag 226

<210> 180
 <211> 272
 <212> DNA
 <213> Homo sapiens

<400> 180
 gaattcggcc aaagaggcct aatgtggctc tttctccttt ttccacctatc tttgatttga 60
 tgctcagaat atgttctctc tgggtgccatg ttgacagcta agtttcccaa ggatagcca 120
 gctttcttta ggagtcttct tcttctcatt cctaccatga tgtgagaatt gactgagctg 180
 gtttctcctt atttggttga cacattacta gtaaccatta cttataatta ttttagatga 240
 tgctagcatc atttttactg ataaggctcg ag 272

<210> 181
<211> 210
<212> DNA
<213> Homo sapiens

<400> 181
gaattcggcc aaagaggcct aagaatgtgc atacatgttt tcatgagtgt cctttgggtg 60
ctgtttcttt taaatcctct gtgcacaggg ctctggcctt tagtaaaactg tttttctgtc 120
ttacgtcatg ctgactgggt gctaggggct gattacaaaag gggaagagtt gaacagacat 180
caggggccga tgaaactaaa tggactcgag 210

<210> 182
<211> 353
<212> DNA
<213> Homo sapiens

<400> 182
gaattcggcc aaagaggcct acgttctgca agtactagtt aatacaataa aactagagag 60
agaaagaggt aattcaaagg caggaggtaa aatgatcact acttgacaa tgagtgtata 120
cctgaagaaa cccaaggga tccactgaaa aactactatc aacatgaaga gagtttcaga 180
aaagatgaca gctgggtaca aaattaacac agagaacca ataggtatca catataaacc 240
aacaactagt gagaagatac aatggaagaa atggccttat tttcaaaagg aacaaaaagt 300
taaaatatta taagtcaatt tcacaggaaa tgtctaaaac tcccagactc gag 353

<210> 183
<211> 198
<212> DNA
<213> Homo sapiens

<400> 183
gaattcggcc aaagaggcct aaagacatca aggcattcaa tgcataccgt tttggttttt 60
attttctcct gtctttgtct ttctggattt tcattctcatg taaagcatgt gggggtttta 120
tttttatatt tttgtgtgtg tgtgcagtgt ctgccccaaag caagtctctt gggaggagga 180
ggcggcagca cactcgag 198

<210> 184
<211> 216
<212> DNA
<213> Homo sapiens

<400> 184
gaattcggcc aaagaggcct attttaattc tatttttcat ttgagctgac ttgtagccac 60
ttcagactat caatggaatc ttatgttgag cttttctctg gctttccttc ctccactatc 120
tctccaactt tagagatcat cccctctccc tccagtgcgt tctatctccc ccacacccac 180
cctagatact cctttttcac ccactcctc ctcgag 216

<210> 185
<211> 208
<212> DNA
<213> Homo sapiens

<400> 185
gaattcggcc aaagaggcct aaaggctgaa tatgaggaaa aattcctggt acaaggatcat 60
actaagcatt ttagttccac ctgccatatt gctgttagag tataaaacta aggctgaaat 120
gtcccatatc ccacaatctc aagatgctca tcagatgaca atggatgaca gcgaaaacaa 180
ctttcagaac ataacagaag agctcgag 208

<210> 186
<211> 184
<212> DNA

<213> Homo sapiens

<400> 186

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gaattcggcc aaagaggcct aatttctcat caccaaggc tgcaaatctt ttcaaatggt 60
atatttcata ttgtggttac tgtctccaaa tatcttctct ttcttctcc ttcaattgcc 120
ttgcagctgg caagtctctg gagtccctgt cccctgccat tgccactga acagacatct 180
cgag 184
```

<210> 187

<211> 239

<212> DNA

<213> Homo sapiens

<400> 187

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gaattcggcc aaagaggcct aggtagactt cctgtgatct tcagaaatca tctacctggt 60
aaaaatacat gctgtttaga atatctgata ggtgtttcca gctactatta gaggtgatag 120
tgctttttgtg ggggaaaaaa ttggtcatgg tgaatggaga tcgaggaagc tcgggacaag 180
ggaggggtgg gctgcctgat tttgtccagt ttccaaata tccacgcaat gaactcgag 239
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<210> 188

<211> 216

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (151)

<400> 188

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gaattcggcc aaagaggcct agtgtgtgtg tgtgtgtgtg tgtctaattc aaattataca 60
caaggagttt gtgcaggctt tcttttagagg cagaagccag ttaggcaggc caagaataat 120
ataaaatcac aaatgaagag aataatgtgt ntatttttca tttgtcattt aggactgtct 180
gggggagact gtctctctctt gggcggaaga ctcgag 216
```

<210> 189

<211> 303

<212> DNA

<213> Homo sapiens

<400> 189

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gaattcggcc aaagaggcct acaatcttta gtttccatag tgtcacacac tattaaattt 60
ttcttctctt cattagctgc acctactcat tctctttggt ggttctctct catcttcttg 120
acaacttttg cagctgcctc catggcattt ccacttggtt atctattaat aatatttata 180
ctaattgtgtt cagaagcaaa tttctgttcc attctacctc ccaattctgc tccaccttca 240
gtcttacctc gttcgattaa agacaactct attcttccac ttgccagac caaaaacctc 300
gag 303
```

<210> 190

<211> 209

<212> DNA

<213> Homo sapiens

<400> 190

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gaattcggcc aaagaggcct atgagaatcc acgcgagacg gagccctcct cgccggccgg 60
cctggagcgt tgggatcttg ttctgttctt ggggatgtat cgtcagctct gtatggagtt 120
cttttaattg agcttctctc tcttccacct cttctctgcc ggggtctcac tctcagcacg 180
agcaccattt ccatggcaac acactcgag 209
```

<210> 191

<211> 195

<212> DNA

<213> Homo sapiens

<400> 191

gaattcggcc aaagaggcct agtgagttgt tataaaacaa tgctgcctct tctattttgc 60
gctttttgtt tgcacaaact cggtccectt ctgtttctct acgatgtttt gatgcagcat 120
gaggcagtca tgagaaccca ccagatacag ctgcctgata ctgaatttcc cagccaacag 180
aaccaaatgc tcgag 195

<210> 192

<211> 215

<212> DNA

<213> Homo sapiens

<400> 192

gaattcggcc aaagaggcct agaaagccct gaccctagat tggttgaatc tgaatctgca 60
ttttaacaag atctctagga ataaatatgc acaataaagt tttaggtgca tggtctctgtg 120
ccatgctgcc tgtttctgac acaaatgaaa gaaaatcagc tattgaagga agcaggtctc 180
tagatctgac agtccatgtg tcttcttccc tcgag 215

<210> 193

<211> 275

<212> DNA

<213> Homo sapiens

<400> 193

gaattcggcc aaagaggcct agtctcgaac tcttgagttc aagagatccc cccacctca 60
gcctcccaag tagctgggac tacatgccct tgccctctgt ttgttttcca ttattttctc 120
acatgtcagg cttcattata tgtttcacag tctttattat tatttacctt cctcagctag 180
aatgtgagtc cacaaggata ggtctgaact cttttactca cagcatttct gaccccaaa 240
tatgtgtctt ttgtctctat accaaccaac tcgag 275

<210> 194

<211> 282

<212> DNA

<213> Homo sapiens

<400> 194

gaattcggcc aaagaggcct acgtcgattg aattctagac ctgcctccag gaccctcccc 60
ctttttaaaa aataaatcgc tgacaagtgt gaatcccggt aagactttat ttgtgttgtt 120
gtgtatcctg tacagcaagg ttggtccttc gtaacaacgg atgaaatggt tccctttttt 180
aaagcgccct ctctccctcc accctcagcg cccctgtcct tggcatgttt tgtatcagcg 240
atcattctga actgtacata tttatgtagc gagaggctcg ag 282

<210> 195

<211> 132

<212> DNA

<213> Homo sapiens

<400> 195

gaattcggcc aaagaggcct agcttgccca ttttgettgc caatgttcca tctttcgggt 60
tctgatttaa tgcttgctca tatgtacta tggcttcttc aggctctaga atattcatgt 120
atgcatctcg ag 132

<210> 196

<211> 224

<212> DNA

<213> Homo sapiens

<400> 196

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gaattcggcc aaagaggcct agccgtgaga cgtttcggga gccggagtct ctccaccgca 60
gacatgacga agggccttgt tttaggaatc tattccaaag aaaaagaaga tgatgtgcc 120
cagttcacaa gtgcaggaga gaattttgat aaattgttag ctggaaagct gagagagact 180
ttgaacatat ctggaccacc tctgaaggca gggtaggact cgag 224

```

<210> 197

<211> 169

<212> DNA

<213> Homo sapiens

<400> 197

```

gaattcggcc aagaggccta agtgaaacta agtaactact gtcagtcaca ttactctctt 60
agcacttttg agtaaaactgt ggtttgattt ttttttgaca gggtaacaa acttggacat 120
acacacacat acataaacac tcatgcaaat caacttaaaa atactcgag 169

```

<210> 198

<211> 209

<212> DNA

<213> Homo sapiens

<400> 198

```

gaattcggcc aaagaggcct actcaaaaga aggaggaaaa acaaggtcct gaaagtgcct 60
atatttcatt agggagggtgg agaaaaaagg gacaaaaaag tgactgagaa gtaataatta 120
acaatcagaa agacactaga gttcatcctg ggagccacgg agggacaagt ttcaaaactg 180
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<210> 199

<211> 306

<212> DNA

<213> Homo sapiens

<400> 199

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gttctagatt cacgcattct tgtacctatg catatgctgt tctctctgtc tgaaatgtct 180
ttctctctcc cctcatctg tcagattcca aaagtccttc tgactgggct cagatgtgat 240
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<210> 200

<211> 176

<212> DNA

<213> Homo sapiens

<400> 200

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gagtagcctg caatgcatcc atccctgcac aatataaggc ttccacagat ctcgag 176

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<210> 201

<211> 198

<212> DNA

<213> Homo sapiens

<400> 201

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gaattcggca aagaggccta atcttttctt agcactgctc tctcatacat atcagggtgc 60
aaatattctt ctgtgccata cagagaaaca aactgctcat catcttctaa ttctctagct 120
gcacaaaaat ctgtgagttt gtacacagac tgtccatctt cccctataac acgcatgata 180
tttctggct tgctcgag 198

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<210> 202
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 <212> DNA
 <213> Homo sapiens

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 actttttccc caaaaatetta ttgcattcag agttttctcat tttagattag cttgcatagt 180
 aataaattat agaagtgaag gttgcaacta ataagcctgt gcttattttt ccatttgagg 240
 tgcataatc acataagggtg gtattagtgc tcttttgtt tgaagctagt ggccatgttg 300
 tatctgtctc tagtgggttc aagcctagca tcttttgtt ttgtttgtt ttgtttgtt 360
 gagacaagtt ctgcctctgt tgcccgggct ggagtgcatt ggcacggtca taactcactg 420
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<210> 203
 <211> 261
 <212> DNA
 <213> Homo sapiens

<400> 203
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 aagaccagac catgttttta tttttatctt ttattttatt attattattt tttgagatgg 120
 agtcttgctg tgtcaccag gttggagtgc ggtggcccga tctctgtcga ctgcaggtc 180
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 gccaccacc acacgctcga g 261

<210> 204
 <211> 211
 <212> DNA
 <213> Homo sapiens

<400> 204
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 acatttagaa gtagattaag agaaaatgag aaatgggatt tttcttttct taatctcttt 120
 ttttttgag acacactctt gctctgtcac ccaggcagga gtgcagtggc actgtctagg 180
 cccactgcaa cctccacctc ccaggctcga g 211

<210> 205
 <211> 223
 <212> DNA
 <213> Homo sapiens

<400> 205
 gaattcggcc aaagaggcct atgtatttt catgatgtta ccttccttgg tgttttcttt 60
 gcacggattc acacacgttt tttacttaga acttgcatth tcacctgctt ggacaggagc 120
 ctgcttgag cacagtcatt ctttgagcac tgtcacccca ttcttcaggg tcccagccat 180
 gcttgcccat cacctgattc cccgtagccc cggaagtctc gag 223

<210> 206
 <211> 231
 <212> DNA
 <213> Homo sapiens

<400> 206
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 cattttgctt accacaaagt ggtagagggg atcctggaca cactggaggg ccccaacatc 120
 ccgcccattc agaggggtccc cagagacatc cctgccatgc tccctgctgc tcggcttccc 180
 accaccgtcc tcaacgccac agccaaagct gttgcggtga ccccgtcga g 231

<210> 207
 <211> 227
 <212> DNA
 <213> Homo sapiens

<400> 207
 gaattcggcc aaagaggcct atacagagat actctagccc actcttgcaa caatattacc 60
 aaggtgcatt tccagtaatg ccagttaaga gcttctatgg agacgttacc caacatataa 120
 cagttgatta tagcatttgg aaaatatgcc tgagggaaaa aataatttat ttatcgtaac 180
 tattattatt ttgccttttc taccatctgc tacaggccag actcgag 227

<210> 208
 <211> 211
 <212> DNA
 <213> Homo sapiens

<400> 208
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 cttttaaatg aaaagacaaa gggtcagaaa atactgggtt tttttttttt ggacagtctc 120
 attctgtgac ccagactgga gtgcaatggc gttgatcttg gctcacagtg acctccgctt 180
 cctgggtcca agtgatgccc cctatctcga g 211

<210> 209
 <211> 152
 <212> DNA
 <213> Homo sapiens

<400> 209
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 agaacaatta cactaacatt ctgtttaata taattgttct tctttgcaat atttttgtat 120
 ttacattat gcatttaaaa agttatctcg ag 152

<210> 210
 <211> 249
 <212> DNA
 <213> Homo sapiens

<400> 210
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 ggaacgcata tgctgcagtg tctttgtggc aagagtctta agaaaaacaa gaacccaact 120
 ggtaagcgaa acatgcata tggtatgttt ttcttcataa taacctgtct gttgctcacc 180
 gagctagatc tgcagttctg ctatgcagga aggcagggga aacataccag gaaccaggac 240
 aaactcgag 249

<210> 211
 <211> 217
 <212> DNA
 <213> Homo sapiens

<400> 211
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 ctaattctgt gacaacaggc atcaacaaaa catgtggcct gttatcacat ggttcctccc 120
 tgtgtgcacc ttcatagaga ttttttccct ttctaaaaga atgaggattc ctctgaatgt 180
 tacactatgc aacaataatg tccc aaatcc actcgag 217

<210> 212
 <211> 191
 <212> DNA
 <213> Homo sapiens

<400> 212
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 agtacactat tagtaggaga atggatcca taaagttgaa gacgcagcat tgcacgcttt 120
 tcttcattct ctttaatttc tctcttttca ttttttttcc tgaatatctc ttgaagcacc 180
 aaaaactcga g 191

<210> 213
 <211> 272
 <212> DNA
 <213> Homo sapiens

<400> 213
 gaattcggcc aaagaggcct aagcaaaaca cagaaagata aataataact taggtcaaac 60
 ctttccttct cattgggtcc atttgccctgt tataaattat tagttaagtc caaagtattt 120
 tgtataatca attctgtata ataccagaat tcaccttata aattatagtg atttttaaac 180
 atttattctg gactcccat aagttttgag atataaaaat acactgaaat tagaacataa 240
 ataacatgaa tttagtaaca ctcatgctcg ag 272

<210> 214
 <211> 207
 <212> DNA
 <213> Homo sapiens

<400> 214
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 tttggtgtca gtatttcttg tcattcttga tttttttgtg aaagattgga gagcaaaagt 120
 ggtatgaaca gttgtcaatt ctgtaccata gtaagcactg tgatgctatt tcattttgtt 180
 tttacaagtg aaacaggagg actcgag 207

<210> 215
 <211> 231
 <212> DNA
 <213> Homo sapiens

<400> 215
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 aggtacttct cgcagagaat gaaagtggga aggagtttcc taacactggg gctttctttc 120
 ccttgctctt acaaaagaca aagcctaggc agtcagtcag tagcactaga gtattcctta 180
 tgggcattaa gaatttctcc tgtttcctgc ctcaatcccc ctccctcga g 231

<210> 216
 <211> 159
 <212> DNA
 <213> Homo sapiens

<400> 216
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 gtattgatta ttgctaatat tcttttttac attcgccatc ttgggtgggtt agagaatatt 120
 ctgctgccat gctaccatct accctccacc ccactcgag 159

<210> 217
 <211> 216
 <212> DNA
 <213> Homo sapiens

<400> 217
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 aaaaaattac ccccaatttt agtgactttt acagaatcaa aaaatactta tatgcttatg 120
 aatctgcagt ttaggcaggg cttggtgggc ctagctcadc tttgctttct gtggggtcac 180
 ctgggctgct tgatagtggg agcggacaac ctcgag 216

<210> 218
<211> 213
<212> DNA
<213> Homo sapiens

<400> 218
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ttctctcccc ctcttggtct ctctttttca aaaatgtttt ataattcctg gaatcaaaac 120
cacttcaggc acacactggt ttattttact gtattattgg attataccgc ctataaatca 180
ctggatgtta ctcatgggcc accgacactc gag 213

<210> 219
<211> 196
<212> DNA
<213> Homo sapiens

<400> 219
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tcttttctat tcttggaact ggattgctgt ggcttcggg cggcataaag ctttttgcag 120
tgttttatac cctcggcaat cttgctgcgt tagccagtag atgcttttta atgggacctg 180
tgaagcaact ctcgag 196

<210> 220
<211> 438
<212> DNA
<213> Homo sapiens

<400> 220
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cctccaggcc ttaatggatt ctgcagggtga cttgctctcc cctgctatct cagcctccag 120
agtagcctgc ttctctcgca ggcgcttctg tttggcttca cggttctctc gggagatggg 180
agatccatgg ggctccgact gtgtagaaac ggagtgaac ctggggaggc cccgtgagtg 240
cctcagcccc caaaatgggt gtcgaaaaga agcgagaggc aaatgaggca tcaggagtgt 300
ttggaaaggg gccgagatct gttcaggagg ccccgcgct atccccaggc gccccgcggc 360
ggcagggact gaggaatcca ccaaaccga ccctggaacg tgccataaac gtcgattgaa 420
ttctagacct gcctcgag 438

<210> 221
<211> 193
<212> DNA
<213> Homo sapiens

<400> 221
gaattcggcc aaagaggcct aggcataata aatgctctc ctccataaagg ctgttaaacac 60
aaatcaaaga aactccccct cttttctttc tataatatgt ttttccttat tgttaattcc 120
tgcatgtggt agcaggagt tagggactgt gggcagcaga agaattaggc cgagggcagg 180
gggtccactc gag 193

<210> 222
<211> 171
<212> DNA
<213> Homo sapiens

<400> 222
gaattcggcc aaagaggcct aatttaacgt cggtagttct gctttattaa aatgcagcag 60
aggtaactct ctgtcccttc cgtttatagt tctctgagag agttctattt tttgggtttg 120
ttttgtgttt tcttttgcac tttgtatctt gtatttatcc ctgactctga g 171

<210> 223
<211> 254
<212> DNA

<213> Homo sapiens

<400> 223

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gaattcggcc aaagaggcct aatctgctcc caagacatca cagctagcaa ccactctacc 60
ttccccaggt aattaaggct ttagagaagt aaaagtcagt tcctcaaaat ctattagatt 120
gggttagaaa atcctatatt ggacaatctc tattagatga ctaatattat taatctattt 180
tagaaaaccc tatcttttac aaactctgaa gtatttttca actacaaaat tccatcatga 240
agattttact cgag 254
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<210> 224

<211> 249

<212> DNA

<213> Homo sapiens

<400> 224

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gaattcggcc aaagaggcct agaactgcat ctagaactaca cggattttac ccaaaaagac 60
agcacttgca cttaggctaa gtgtctttct ccacgtaac caattttattg aatcacttta 120
agagtgatca ttggggaaat ttctctctctc agccttattt tggccttttg aaacagcaac 180
aaagactgcc tagtcaaata actccttagc tgattttacc ctcaaagcg ttttcgtact 240
ttctcgag 249
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<210> 225

<211> 269

<212> DNA

<213> Homo sapiens

<400> 225

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gaattcggcc aaagaggcct agcaggataa agcttaaaca catctcttgt ccattcaaga 60
ccctggggca tctgtttttg ccagcagctc ctcacagggt ccattccatc aaagctggtt 120
cagttattta cctgttccca gaggccatgt tttgcctgtt gtcacttggt atgcttctct 180
tatgcaataa tattttgtat gaaggtttct cccaggcact gtgcttggaa tcttacacca 240
tatttaatct tcacagcacc agactcgag 269
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<210> 226

<211> 211

<212> DNA

<213> Homo sapiens

<400> 226

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gaattcggcc aaagaggcct agtctagatt tctttcaaac aaaaattaaa gagcaagaat 60
cattactgta taaatttttc ccagaggaga aaatttaatt ttctcttata ttccaggat 120
tatgcgttgt tcataatat atatattttt ttctacattt atttttcttt ctttttttaa 180
cttttgtttt aggtttggtg gtactctcga g 211
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<210> 227

<211> 215

<212> DNA

<213> Homo sapiens

<400> 227

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gaattcggcc aaagaggcct acatgttttt tcatgttttt cttttcctct acctgcaaca 60
tcctccacat tcttcttctc cagggtcact cctatgcatt cattgcttct actgccatct 120
ccttcaagac aacttgctcc tggaaaccaa atcacccttc tctctgctcc cacaggaccc 180
tgtgcacatt tatatccgag tactcaggtc tcgag 215
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<210> 228

<211> 237

<212> DNA

<213> Homo sapiens

<400> 228

gaattcggcc aaagaggcct agccagttag aaaggagctt accaaaggca gtgtacgaag 60
 aagggttctg ggagactgtc agaaatgagt ttttactga acttcaccct gccggcgaac 120
 acaagcaacc aaccattttg ctttgcttgg tgttgtctgt ttttagcact gaaagtccctg 180
 ggcagctctc tggacaatgc ggatgacgtc ctctcctgtc acagggtggga tctcgag 237

<210> 229

<211> 101

<212> DNA

<213> Homo sapiens

<400> 229

gaattcggcc aaagaggcct agtttgtgtg caggataat gttatctgtc ttaggaggca 60
 atgggggtcaa tctggttact tgggtgacct cactgctcga g 101

<210> 230

<211> 235

<212> DNA

<213> Homo sapiens

<400> 230

gaattcggcc aaagaggcct actaaaatc ttatagtctt aataataaag agttagcttt 60
 attatatgga gtaagggaa gaggaatctt ttaaaattct gagtgggtgag agaaatatat 120
 atgaattttt ttttttacac aaatgagttt tcattgggtc tgtttctttt tatttcttct 180
 gtgtagggtg aattgttate tattgtctga gaacaaatta ccacataaac tctgag 235

<210> 231

<211> 344

<212> DNA

<213> Homo sapiens

<400> 231

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 ttcagcctgg acaacagagt gaggtccctt tgtggccaga ggccagccct ccttgccctg 120
 cttcccttga cctctctttt ccatccatga agccctcagg cccttgccat tttttacca 180
 cagaaaatc atggcttctc cagaagcctg agtatctctc tttccagca caaatggcag 240
 catctctate ctgcccacat tgggccactt cagcttctg tagacacca agacagatgg 300
 acagtgttgg agggaatcag gctttgagga tccagagtct cgag 344

<210> 232

<211> 323

<212> DNA

<213> Homo sapiens

<400> 232

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 agtgttgagg atttttacat ctgcttatga gaaatacttt attggtctat aatttcttcc 120
 agtatctttg taattttttt ttaagagatg gggctcttgc ttgttgccca ggctggagta 180
 caatgtgcaa tcataggtct ctgcagcctt gtattcctgg actcaagcaa tctcctgcc 240
 tcagcctctt gggtagctgg gactacaggt atataccacc atgccagct tctttgtgtg 300
 gttttagtga cagagatctc gag 323

<210> 233

<211> 478

<212> DNA

<213> Homo sapiens

<400> 233

gaattcggcc aaagaggcct accctgatcc ccttctcaga acagcacagt gtccccacca 60
 agtgctaata aatgttgttg gataacagaa caatttggtt taaatctcct ctcacagagc 120

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agaatcgctt ggagggatatt tgccttgaaa attaaattct gatatcaatt tctaaaatta 180
tttacaatat taaagttgaa atgaatccat cacacagttt ccttccaatg ttagtctttc 240
aagtgaacct actttcctat tagcagtcac ctaaaaacaa ataagcaaac aaacaggtaa 300
ctcagtccttc cctctgactc agtgtgagga aaggggacagg cagcatctgg tgacagctta 360
cttcagtggtg tctccatggt tcttcaccaa aaccacttgt gtttcctctt caagcaccac 420
agtatcctat gacactaggc cagtgggctc tcaaactttt ggaattcagg aactcgag 478

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<210> 234

<211> 119

<212> DNA

<213> Homo sapiens

<400> 234

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gaattcggcc aaagaggcct atctagacct gggtaagtta cagaggcaaa taaaaccagc 60
aattataaca aaatatatga agtatgatgg tagagatata tattatacgg gctctcgag 119

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<210> 235

<211> 253

<212> DNA

<213> Homo sapiens

<400> 235

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gaattcggcca aagaggccta gaggaatctt gtcttttgta catgtttgtt tgtgacatat 60
tagatctggtt tgattcctct gttttagttt tgaaatgtgc atgttatccc agctttccat 120
tatttggttg tcccttaagt gtgcctctga tatgttgac ttatggagag gtcacacctt 180
gccagctgcg cttaccttac ctatacttgc caacctaggg gtctgctact gtcaaacaca 240
gcataaactc gag 253

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<210> 236

<211> 244

<212> DNA

<213> Homo sapiens

<400> 236

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gaattcggcc aaagaggcct aaaggaatgc tttcacaata gtgtatcagt tcttttgttt 60
tggttaaagtt ggaatttatt ctgttgccag catttaagta gtcattggcaa gtcttggttt 120
taagacctttt tggagactgg agctttctgt tccattaagt cttttgttta tactacaaat 180
tgtcacctca cttagtccag atgaaatctg ttactctaca aggaagggtg tcatcaatct 240
cgag 244

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<210> 237

<211> 171

<212> DNA

<213> Homo sapiens

<400> 237

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gaattcggcc aaagaggcct actttgggat tggatgatac agcttttgct tctgtgtagt 60
atacctgtac ataactgttt caggcagcct ttctttaatg ttttcagttg gtttgatttc 120
tgtagctcag tagctgctaa taaagttaaa gatcctgtgt ccagtctcga g 171

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<210> 238

<211> 200

<212> DNA

<213> Homo sapiens

<400> 238

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gaattcggcc aaagaggcct ataccagtgc attaatttgg gcaaggaaaag tgtcataatt 60
tgatactgta tctgttttcc ttcaaagtat agagcttttg gggaaggaaa gtattgaact 120
gggggttggt ctggcctact gggctgacat taactacaat tatgggaaat gcaaaagtgt 180
tttgatatg gctcctcgag 200

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<210> 239
 <211> 238
 <212> DNA
 <213> Homo sapiens

<400> 239
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 ggtgtctgag ccagctcca gagtccagcc ccgcctccca cctcgaaggg agggacaagt 180
 tctgtctggc ctctttgata agggcactaa tctattcat gaggatggag ccctcgag 238

<210> 240
 <211> 250
 <212> DNA
 <213> Homo sapiens

<400> 240
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 agattatgat aagtgtctgt gattaaaata aagcagggaa agagaatagg aaattctagg 120
 ctggttgag gggttgtaac ttaaaataac atagtcagag aagtcatgaa ggaaaaatac 180
 ctgagacagg ttgttttgca cagatttatg gaaaaagtgt cccaggcaga aggaatgcaa 240
 ggctctcgag 250

<210> 241
 <211> 223
 <212> DNA
 <213> Homo sapiens

<400> 241
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 ccaccttagg caatctctgt gtaaagttag tttactagat tatttagtga ctgtactgta 120
 gctgaaatag aacgcaatgt tgccaaatag aaaaataactt ttactgggac tgaagataat 180
 tttttttttg aggcggagtc tcgtctgtgc gccaaacctc gag 223

<210> 242
 <211> 240
 <212> DNA
 <213> Homo sapiens

<400> 242
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 atgcttgggtg atatttttagc gggcttattt ttgaaaggca tctgttactt cagtggcata 120
 aagtgccttc acactgtgt gcagccatca ccaccattca tctccagaat ttgttctcag 180
 tccccaaactg aaactatacc attcaaacaa cagcgtccc catttcccca tccccctcag 240

<210> 243
 <211> 268
 <212> DNA
 <213> Homo sapiens

<400> 243
 gaattcggcc aaagaggcct agtctgggac tttcaaactc tcagaagagc caaatccagg 60
 ggaagtagca ggcttgcaat cttcaggtaa agaagcagct ttgaatctga gcttcataac 120
 gaaagaagag atgaaaaata ccagttggat tagaaagaac tggcttcttg tagctgggat 180
 atctttcata ggtgtccatc ttggaacata ctttttgag aggtctgcaa agcagtctgt 240
 aaaatttcag tctcaaagca aactcgag 268

<210> 244
 <211> 190
 <212> DNA

<213> Homo sapiens

<400> 244

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gaattcggcc aaagaggcct accaaactat aactgtcctg cctttcttta ctggtaatat 60
gatttccaat gtcgtacttt ttcattgattc ctatcctaaa agtgtgcata agttttattt 120
gttttttacc atttgttttt tgttttggtt tggtttttta cctagagaag tgaaaggggc 180
accctcagag                                     190
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<210> 245

<211> 286

<212> DNA

<213> Homo sapiens

<400> 245

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gaattcggcc aaagaggcct actagatttt tctttcaaat aaaattttta ttcaaaattt 60
ttagatacag aacaatatta tattctaatt gggcttgctt taaatttgta aataaacata 120
aagggttgac aactttgtga tattggaact ctgcaactaa gtacataata tgtatttcca 180
tttgtccaga tctacttttg tgtcttttgg aagtgtttta tggtttactt catgtatgat 240
cctcatgtat atttattatg tttctgtttt aatacgttca ctcgag                                     286
```

<210> 246

<211> 222

<212> DNA

<213> Homo sapiens

<400> 246

```
gaattcggcc aaagaggcct attagaaacc actttcctgg tgaagctgaa acattatata 60
attcccttga gccatcttat cagaagagtc ttcaaactta cttaaagagt tctggcagtg 120
tagcatctct tccacaatca gacagggtcct catccagctc acaggaaagt ctcaagtaag 180
gtcatataaa taatgattac tagtctcttc ctcatcctcg ag                                     222
```

<210> 247

<211> 254

<212> DNA

<213> Homo sapiens

<400> 247

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gaattcggcc aaagaggcct actttagtct gaaccgggat cttacaggag aattagagta 60
tgctacaaaa atttctcggt tttcaaatgt ctatcatctc tcaattcata tttcaaaaaa 120
acttcggagc agatacgaca aagggtcttt atattggcct gagaggagag tggactgagc 180
ttcgccgaca cgaggtgacc atctgcaatt acgaagcatc tgccaacca gcagaccata 240
gggtcctact cgag                                     254
```

<210> 248

<211> 264

<212> DNA

<213> Homo sapiens

<400> 248

```
gaattcggcc aaagaggcct aatttaagga atggtgacta ctgaggagaa ttgcagtctt 60
gaatacttag catattcttc attcattaaa cttttattaa gtgacctgtc tgtgctagtc 120
actgccaggc agctgctga tacatgggtc ctctgcctg ggagctccca gtctgagaca 180
gaaaggtcaa cagttctaat ggcaggagtt aagtgccatg agagcatatg ggaggggcag 240
ccttacagcc aggataagct cgag                                     264
```

<210> 249

<211> 263

<212> DNA

<213> Homo sapiens

<400> 249
 gaattcggcc aaagaggcct acgattgaat tctagacctt cctctctcat cttttgctct 60
 cctcttaggt tttctcctta ttttccatag caagagtgtg cagagttttg attggtgaga 120
 tttaccattt gatatactca cataagttca ggtttcagaa tatctataaa tttatgatta 180
 accaagggtt gttatatata attcacttgg catattgtga ctgtttattc tatccctaca 240
 ctggggtagc accccagctc gag 263

<210> 250
 <211> 113
 <212> DNA
 <213> Homo sapiens

<400> 250
 gaattcggcc aaagaggcct aggttggtga caatggtatt gtggttatta ggacaattat 60
 ttattttgcc ttggtgtcag aggcgtgtga accagagcaa ctctcatctc gag 113

<210> 251
 <211> 244
 <212> DNA
 <213> Homo sapiens

<400> 251
 gaattcggcc aaagaggcct agtgtagctt ggttttattt atgtccacaa atatttcaaa 60
 aaaattacaa aatactcaaa tggagagaac acagaagtca cgatttctgg gtgtctactg 120
 tttacactgt gttatctcat ggcaaaactac tcatatatac atttagcttc aagatatata 180
 gaaacgtagc aaatccgagt gtgcacgctg cctctgccgc agtggagtga agctcaacct 240
 cgag 244

<210> 252
 <211> 291
 <212> DNA
 <213> Homo sapiens

<400> 252
 gaattcggcc aaagaggcct aaatttatta aggggtagat cactttttaga aaaattgctg 60
 gaagtaattt ttcattgatca ttttatctac attctaaaaa ttaggagaga gactgtgtac 120
 aaagagtgtt tatttttagag ctttccttgt atttcaaatt gaataacagg cattctcatc 180
 ataaagtttt taaaagaaag gcaaagcaga ctttctgtag gaaatcattg acgttaaaat 240
 agttataatt gtgaacagat acaacattta ttcattgaagg taattctcga g 291

<210> 253
 <211> 195
 <212> DNA
 <213> Homo sapiens

<400> 253
 gaattcggcc aaagaggcct agttattttg ttctgttctg tcatgtgcc aaaaatatgt 60
 acttttttca cttttttccc tttgtatate agttacgggt tacaactggt tcattctgaa 120
 aacaacaaca acaaagttcc attcatatct ttttaacaatt gtataagtgc ccaagtaatt 180
 cactacagcc tcgag 195

<210> 254
 <211> 284
 <212> DNA
 <213> Homo sapiens

<400> 254
 gaattcggcg ccgcgtcgac tttttgatgg aacacagttc tgtgatggga agctatccca 60
 gtctcccatc cttgcaaaac tgctgcttag tactcaggtg ttctctaggt tggtctggaa 120
 catttacaaa cttcttttggg tgtgaggatg tgctgccaca aggccaaaaa tcacattctc 180

tctctctctc ctctcctctc taccattctc ctcagtgcc a ggtggggaca gattccaccc 240
actgggcctg ggaggaagaa aagcaccttg gcccccgctc cgag 284

<210> 255
<211> 219
<212> DNA
<213> Homo sapiens

<400> 255
gaattcggcc aaagaggcct acttgggagg ttgtgtgttt ccaggaattt atccatttcc 60
tctagatttt ctagtgtgtg gcagagaggt gttcatagta ggcattgatt gatgatctgt 120
atttctgttg gatcggttgt aatgttacct ttgtcatttc tgattgtgct gatttggatc 180
ttctcccttt tttttattaa tttcgctagt ggactcgag 219

<210> 256
<211> 180
<212> DNA
<213> Homo sapiens

<400> 256
gaattcggcc aaagaggcct agcatactgg tacatgagag cagtagtggt gtttgccttt 60
attttcaacc agggagctat ctggcacctt ttgtgctcct ggcttttttc aatcatagca 120
ctattgcacg tctagctat ttcttttgcc cagcagggtg atattgagtc ccatctcgag 180

<210> 257
<211> 500
<212> DNA
<213> Homo sapiens

<400> 257
gaattcggcc aaagaggcct aggaagagac tagaagaaca gcacgcccag caattatcac 60
tactcatagc tgagcaggaa agggacaag aaagactgca aaaggaaata gaagagcagg 120
agaaaatggt aaaagagaag aaggcaatga cagcggaagc ctctgagttg gacattaaca 180
atgcagtgga attagaatgg agaaaaataa gtgactctag tttgctggaa acaatgctgt 240
ctcaagcgga ctcactccat acttcaaatt caaatagttc tggtttcaca aattctgcca 300
tgcaatatag ctttgtttct gcaaacgaag caccattcta cctctgggga tcatcaacta 360
gtggcctgac caaactctca gtaacaaggc cttttggaag agccaaaact agatgggtctc 420
aagtttttag tctggaata caagcaaat ttaacaaat aactgcagtg gcaaaaggat 480
ttcttactcg tagtctcgag 500

<210> 258
<211> 302
<212> DNA
<213> Homo sapiens

<400> 258
gaattcggcc aaagaggcct agtgcaaaat taaagaattc catgataact atgttatattt 60
ccatttgcac gtgcatttgt ctatcgatcc ctaaaatata tcttaaatta gtctgctttt 120
ctccactttt cccctccat tttattttta tttatttatt tattttgaga caaggctctag 180
cactgtcgcc caggctggag tgcagcaaca caatcacggc tctctgcagc cttgaccttc 240
caggcccaaa tgatcctccc gcctcagcct cagcagtagc tggggcggga ggaccactcg 300
ag 302

<210> 259
<211> 283
<212> DNA
<213> Homo sapiens

<400> 259
gaattcggcc aaagaggcct ataaagatta ttatattaat tcaactttga tctgatatat 60

cacttaaact aaaggggtgt gtgtgggtga tgcctgttct ctatttctgc tctttaaaga 120
 tactttgaat caataaaacc attagtctac aaatcaaatt gtgaacttaa tctctagaaa 180
 gagaatataa ctcagccatt tataggaatt taggttcaag tacaggatat atgaaatctt 240
 ttcccagtat ttcagaatgt acttaattca cagatcactc gag 283

<210> 260

<211> 279

<212> DNA

<213> Homo sapiens

<400> 260

gaattcggcc aaagaggcct actggcctca agtgattctc ctgcctcggc ttcccaagggt 60
 gctggaatta cgggcatgag ccaactgcgc tgaccagaaa agtgggttac ctgataaagt 120
 ggcattttgaa ctgagatctg aaagtagaat atacttgaag tagatgaaga gaggaatgac 180
 aatattttat agcagaaagg acagcagccc ttggtggcag gaggcattgt gtattccagg 240
 aacgaaagac caatgcagct gtatggagc accctcgag 279

<210> 261

<211> 208

<212> DNA

<213> Homo sapiens

<400> 261

gaattcggcc aaagaggcct aggtttgcct ctccttacag cacagagtta tcatcattat 60
 ccatacacc atagaattca gaacaatctt ttcctagtac tagaattggt gcatcatgat 120
 tatttcatatg tccatcttgc aattaataaa aataactaaca atactaacat acgttgggtca 180
 ggcaggcact gcacaaagcg acctcgag 208

<210> 262

<211> 160

<212> DNA

<213> Homo sapiens

<400> 262

gaattctggg actaaattct gtaacatctt cgtggatcgt tctgctactg tgggaaagac 60
 agcattttgt tacagcagag accagaattg agaaaaccag aataaaaaaa ctgttcccta 120
 ggccatgaag gccggccttc atgccctagt tctccctata 160

<210> 263

<211> 226

<212> DNA

<213> Homo sapiens

<400> 263

gaattcggcc aaagaggcct acgttgaagg acaccagctg cggaatttgc ggctttggca 60
 gattgaaatc atggcaggtc cagaaagtga tgcgcaatac cagttcactg gtattaaaaa 120
 atatttcaac tcttatactc tcacaggtag aatgaactgt gtactggcca catatggaag 180
 cattgcattg attgtcttat atttcaagtt aaggccccca ctcgag 226

<210> 264

<211> 201

<212> DNA

<213> Homo sapiens

<400> 264

gaattcggcc aaagaggcct aatgccatcc cctctgcctg gaatgccctt ctgcatgaat 60
 gccctgtgaaa tgttgttgct cctttgtatg gccctggctc cgtgggttggc aggaatctct 120
 tctttcgttg tattctctgc atctttgtgc atcacagtca gctttgtatt cctagcttgt 180
 aagctacggg agaaactcga g 201

<210> 265
<211> 229
<212> DNA
<213> Homo sapiens

<400> 265
gaattcggca aagaggccta gtatgtgtgc tttctttgcc ttctatttc ctttcaaaga 60
aatctcttgt aaattacaaa actgtgaatt gggttgccaa aaactgttgc ctttcgttag 120
atgcttcaaa cagtgtaaat cctatactgc accctgtcca cctctgctcc ctccctccctc 180
ccttgagagt gaggacctca tccgaccatg taattacatg tcgctcgag 229

<210> 266
<211> 249
<212> DNA
<213> Homo sapiens

<400> 266
gaattcggcc aaagaggcct actttaacca tccctcccta tgaagtataa aaaaggtaact 60
gccagctggg tgcagtggct cacgcctgta atcgagcat tttgggaggc cgaggtgggt 120
ggatcacctg aggtcaggag ttccgagacca ggatggccgg catggcgaaa ccgcgtctgt 180
actaaaagta caaaattagt tgggcgtggg ggtgcgtgcc tgtggtttca gctacctgga 240
gaactcgag 249

<210> 267
<211> 276
<212> DNA
<213> Homo sapiens

<400> 267
gaattcggcc aaagaggcct agtaggggag tgcgtgaggc cggcgctgat tgataggagc 60
caaggccaat cataacgatt accgtagact ggaaggcgga ccaagaatac gctaatgagt 120
tgctaatttt gacagatgtc cttcggcctt ctccgtgtgt tctccattgt gatcccttt 180
ctctatgtcg ggacactcat tagcaagaac tttgctgctc tacttgagga acatgacatt 240
tttgttccag aggatgatga tgatgatgag ctcgag 276

<210> 268
<211> 312
<212> DNA
<213> Homo sapiens

<400> 268
gaattcggcc aaagaggcct agtcttcaat aaattgatta gtatcaaagg gaagatctta 60
aatcttggag cttttctttt tggaaacctt taattcagtt cctgtcacac cttcctttga 120
tttttaaaaa aatctccctt taactgttct gggatctcac tgctgctccc acacgcctaa 180
cacccatccc ctccacatcc acccaaaggg agacactggg ggaggcaagt gtatggaatg 240
tctttgcatt tagatgettg aactctgaca tcatctcttt tattcataag tttattcaac 300
actatactcg ag 312

<210> 269
<211> 187
<212> DNA
<213> Homo sapiens

<400> 269
gaattcggcc aaagaggcct agagtactg aagcacatca aacacaaaga cagtaattat 60
cagagtgccc ttcttacatc agcgatttat gcaactccaag gccgcagtgt ggctgtgcaa 120
aaacaaatat ctaaagctgt tcacagcaac cctggtgacc ctgctctttg gtctctgttg 180
ctctcgag 187

<210> 270

<211> 328
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (31)

<400> 270
 gaattcggcc aaagaggcct actgcacgtt ntgagcatgt acccatttaa ccaaaactta 60
 aagtataatt aaaaaaaaaa gaataagaat acaacaataa aaatacatat aagaaacaat 120
 ggagtataac agctatattac atagcatttg catcatatta ggtattctaa ctcatctgga 180
 gatgattgaa agtatatggg aagatgtgcc aagggtatat gcaaatacta tgccatttta 240
 taatagggac ttgagtattt gcagatttgg gcattctctg gaggtcctgg aaccagtccc 300
 ctcggatacc aaggtacggc aactcgag 328

<210> 271
 <211> 207
 <212> DNA
 <213> Homo sapiens

<400> 271
 gaattcggcc aaagaggcct agcagtaatc tctatgatgt tctctccttc tctgcttcaa 60
 cccagagccc tcccttcccc acctctcaga ctctcccact gtgccatgtg gaagtgtcac 120
 aacacaacca catgctctgc tgtatcatct ccttgtctcg aaaagctctg tttgctccg 180
 acttcattga gacccatcaa actcgag 207

<210> 272
 <211> 301
 <212> DNA
 <213> Homo sapiens

<400> 272
 gaattcggcc aaagaggcct acaaaatata attattccgt aatttcctaa agtgcaacttg 60
 tatgtattga aaagattata gatagaaaca tacataactt ttaaagtgtt tctatgcgga 120
 atttctcatt atgtccagca tgtggtttac catgtttatc atctcctgtt gtcttaaggt 180
 cagggggttc aacaaggagg gtcaaaattg gccggggctg agcacaaata cacaccaca 240
 gcccttcagt gacctcaggc agcaagatgc ctcccacctc cccccaacac ccaagctcga 300
 g 301

<210> 273
 <211> 149
 <212> DNA
 <213> Homo sapiens

<400> 273
 gaattcggcc aaagaggcct aggcacgctc tctctctacc cgaccaacct ccctaccacc 60
 tgaaagcctt caacctgcgc atcagcttcc cgccggagta tccgttcaag cctcccatga 120
 tcaaattcac aaccaagacc tgccctcgag 149

<210> 274
 <211> 231
 <212> DNA
 <213> Homo sapiens

<400> 274
 gaattcggcc aaagaggcct aatctacttt tatctataca gtacacatag aaggctatgt 60
 gactatttag aattcaatgt ttgtttacta gtccatcttt agcttacatg ttcattagtt 120
 ctgagtagaa ccaagaaaaa ctaattgaag agtatatgct tatgtattat ctcttgctgt 180
 gatttaacca atcttgttac atgtattact aataaaagtc cccagctcga g 231

<210> 275
 <211> 291
 <212> DNA
 <213> Homo sapiens

<400> 275
 gaattcggcc aaagaggcct aatctattca aactataaga agattacctg ctgacatacc 60
 tcaatatttc tatagaaatt gcgattgata ttccaattta agggagtaat catctagaag 120
 agacatatac aactgggtgag aaaacacatt tggctcggca cacttggtta catagtacgt 180
 ttatatttat gaatgacgaa cagcatgaca tctgaagaca acatcatcaa gagaaagatc 240
 caggatgaac taaaaacaaa ccaaaacaaa tcaaccctgg agaaactcga g 291

<210> 276
 <211> 271
 <212> DNA
 <213> Homo sapiens

<400> 276
 gaattcggcc aaagaggcct acgtcatcat agctcacggc agccttgaac tccagggttc 60
 aagcagtcct tctgccttg gtccccctgag tagctggcac tacagacata cgccaccaca 120
 cctggccttt tttttgagag gagaccttgc tgtgttgccc agcctggctc tgaactcctg 180
 gcctcaaatg atcctcccaa agtgcctggga ttacaagcat gagccaccgt gccagccca 240
 cttcataaat tttagtcctg caatgctcga g 271

<210> 277
 <211> 233
 <212> DNA
 <213> Homo sapiens

<400> 277
 gaattcggcc aaagaggcct aaataaacag acgctgtggc tactggagtt cctcctggct 60
 ccttggtgag agtagagagg taatctcgtt ttccaatat aatcttttag gtgtttgcct 120
 caggtacctc ttggaagtag aactgagga ttccagtttg tttgacttcc tgccagctga 180
 gttcaagagg acaagctaata gaatacctta tgtttcttgc acacatcctc gag 233

<210> 278
 <211> 283
 <212> DNA
 <213> Homo sapiens

<400> 278
 gaattcggcc aaagaggcct agtgattatt attaaggata gtaacccttt ggcattattg 60
 ctgcaaattt ttctcctaaa tttttactca cttcttagct attggctttg atgtttctga 120
 cataaagaga tttttaattt ttatgtgtta tatctttgga tctttttctt ttttattctt 180
 ctggttatct ttacacttag aaaattctca tgtacgccag gtgcgatggc tcatgcctgt 240
 aaccccagca atctgggagg ccgaggatgg tggatcactc gag 283

<210> 279
 <211> 222
 <212> DNA
 <213> Homo sapiens

<400> 279
 gaattcggcc aaagaggcct acagagataa tctggcttgg ttaccctcat aatctaattt 60
 cagaaaagaa agcttttatt taacactcat ctgaatcaac attaaagcct ttctctctca 120
 agcgtttatt gagaaactca aatgaatata ctttttgaat tactgtcatc aaaagtgtac 180
 ggcttcctgt gctgcttgtg tcaaatggaa ccggacctcg ag 222

<210> 280
 <211> 347

<212> DNA

<213> Homo sapiens

<400> 280

```
gaattccgcc aaagaggcct agtaaatacca ccacaaaaat tattaatcct cttgagagaa 60
acgtgaaacg ccacaaaaat agagaaaatt caggtctgta tgcacatggat cgtgttggtgta 120
ttttcagaga acatccccgt tctgaagctg ctgcagctcc ctccctcaggg atcacactgc 180
cgtcacccac tctgcactgg ggcgtttcct actgcgcctc gtgctggcgg acgcagctgg 240
gtgcagaagc tgtgggggtcg gagaggcgtt tggagaaggt ctgtggtgca gtgtgtgaaa 300
attcaggtgc tagaagccta ctggtagaaa aacccaaaaa gctcgag 347
```

<210> 281

<211> 159

<212> DNA

<213> Homo sapiens

<400> 281

```
gaattcggcc aaagaggcct accaactctg gacaaattga tgacccccag gagcagcaca 60
gagtcacatcag cagcaacctg gccctcatcc aggtgcaggc cactgtcgtg gggctcttgg 120
ctgctgtggc tgcgctgctg ttgggcgtgg tgtctcgag 159
```

<210> 282

<211> 207

<212> DNA

<213> Homo sapiens

<400> 282

```
gaattcggcc aaagaggcct aatttttggg ggttttagtg atcagtaac aaatttgtac 60
ttattatgct tgttcaggta atttacttga ctgtctctatt tgtttgtcca aaagataaaa 120
tgatgagaga gattcgagag gtctttgatc tgtctccctt ttaagaaatg aagccagctg 180
gtaatgtata ttcaggaccc tctcgag 207
```

<210> 283

<211> 328

<212> DNA

<213> Homo sapiens

<400> 283

```
gaattcggcc aaagaggcct agagtacttt tgcatatatt atttaacccc tccaacagtg 60
ctttgaggaa gataactatt tttatcccaa tttgctcgta gggaagattg cttgaagtca 120
cactaaatag tagagccaga attcaaacca aagctatctg atccagttcc taccattctt 180
aaccattctg ctaattttcca gaagtccagc tgataaagtg taaaacaaaa gttgtttggt 240
gctgtttacca agaaaatata agggaatgct ttctactaat acatcagcag cctctcttct 300
tcttcccttc tctctccta ctctcgag 328
```

<210> 284

<211> 323

<212> DNA

<213> Homo sapiens

<400> 284

```
gaattcggcc aaagaggcct agtgagagaag aagaaagcca ggatccccac actaccaacg 60
atcagaagtt tgcccaacag gaagagggaag tcagtaactt tatccaggac agccactctg 120
ataatgtttc tcatgagcag gaagaaggca ttcttgcccg aggtgcagaa attggtgccg 180
tagatggcaa tcatgatgta ggcattccta ttaaggaatt tgatgaactt ctccaggcac 240
cagaagcagc atttgagaca ggtcatgagg cacttggcaa acttggtctc tgcagctttc 300
agccgctgat ccaggctactc gag 323
```

<210> 285

<211> 410

<212> DNA

<213> Homo sapiens

<400> 285

```

gaattcggcc aaagaggcct accacgatga cagattacgg cgaggagcag cgcaacgagc 60
tggaggccct ggagtgccatc taccctgact ccttcacagt attatcagaa aatccaccca 120
gcttcacccat tactgtgacg tctgaggctg gagaaaatga tgaaactgtc cagactaccc 180
tcaagtttac atacagtga aaatacccag atgaagctcc cctttatgaa atattctccc 240
aggaaaatct agaagataat gatgtctcag acattttaaa attactagca ttacaggctg 300
aagaaaatct tgggtatggtg atgattttta ctctagtac agctgtgcaa gaaaaattaa 360
atgaaatagt agatcagata aaaactagaa gagaagaaga aagactcgag 410

```

<210> 286

<211> 387

<212> DNA

<213> Homo sapiens

<400> 286

```

gaattcggcc aaagaggcct atgcggtttc aggetttatt aacaaacggt gtaaaaaacc 60
agacgggatct ggaggaaggg acagggtctgc ccgtctcagc tctcaacett cccagagagg 120
ggccaggcct ggcagccctg tgcgtcgcgc ctcttaagca gtcaaccttg tcccctccaa 180
ggacaggcat ctgacccaat ccagggtccca gggaggcgga gtcgcaaacc ctaactctgg 240
ggtgtattct gctcggccctc ctctccccct ccccagatag ctctcccagc ctggggcagc 300
gacagcacag actttgcaga catcaccgag ggagggttct cagtgcagac aggagctgag 360
gtagggggttg gagaggctga cctcgag 387

```

<210> 287

<211> 369

<212> DNA

<213> Homo sapiens

<400> 287

```

gaattcggcc aaagaggcct aaaagtatct actagaataa taattccctg gccctattgt 60
cctttatttt aaaaactatt ctggtatatt gctacatttc tttttctcta caaacttaaa 120
attattttgc cactttatcc ttcttaataa aaccatatcc gtttttattt tagtgaagtc 180
acattgaaag tattaaactgt ttgcataaga tattcttgta atatccagga tttcttataa 240
gaactgagat tttttaaaaa ttattttctg tctcagtaaa gcttttttct acacagatat 300
ctaaatatgt cacttaaggc aattactagt tgtttatttc atgtaatat attccggggt 360
gctctcgag 369

```

<210> 288

<211> 211

<212> DNA

<213> Homo sapiens

<400> 288

```

gaattcggcc aaagaggcct agaaaagtgt cctgtctcag atttttcact gtgctgcact 60
gaagtttcgt ttgagtgttg ccccatcaca gcaaatgtat gttacttatt tccacacata 120
acagattatg ctttcattaa catcccagct gctgcatttc tcttcagct ttttaacttc 180
cgtaaattca catctttaca tgttactcga g 211

```

<210> 289

<211> 581

<212> DNA

<213> Homo sapiens

<400> 289

```

gaattcggcc aaagaggcct aggaatagca aatagaagtg ctagtattta ctagatgcag 60
tgattgctac agtttggtttt aagtaaaaca gattgttttt gattattttt aaatcaggca 120
ataatatata atgctgttta cagttcttta aaaaatatgt aacttaaaaa ctcagattgg 180

```

```

gaaggggtaa caatctgagt ttttcttttt ctctaagtgt tctgtgaaaa tcttttttta 240
agtcgttctt acttcaggta ttatcacaaa tgtttgattt ctatatgtat gccttaagtg 300
atatatgaca cttttttttt cttgactctt ccttgcgga aatttcattac ttgttcatag 360
tttgaatcta agaaatatct gcttttcata gtcagcaggg ccaaaacttt ggtcttgaca 420
actttttgtc aggcattttt acatategac agtggttttt cataaactgt attgcttttg 480
caagtatata gtaaatTTTT ttcttaatct tcagatgtta tagtatcaaa aattcaaaga 540
cctaagtttt aaaaatgtaa ttgtttgcag taatactcga g 581

```

<210> 290

<211> 264

<212> DNA

<213> Homo sapiens

<400> 290

```

gttctaactg ccttcttttt tctcacagag gtggcttatg gcagattttt cctccttcaa 60
actccaaaca taatttttaa gactatgtgc cagtggactc ttcccttata tctctgcacc 120
acaagtgtgt ggatgttttc tcttctctcc ttatgtctac ctcaccaacc tcgctcatca 180
tttggccctt atccttctct gtacacctac cttcagattt ctgcttacac ttgatttca 240
gagctttatc cccagtcct cgag 264

```

<210> 291

<211> 151

<212> DNA

<213> Homo sapiens

<400> 291

```

gaattcggcc aaagaggcct acgaatacct tcatttacct gtgtcttctg ataacacctc 60
tcagaaagct atagtctctg aaagtttcta taggatttct aaaatttcaa atatgcagtc 120
acttaaaaaa aaaccacacc acgtactcga g 151

```

<210> 292

<211> 476

<212> DNA

<213> Homo sapiens

<400> 292

```

gaattcggcc aaagaggcct attacctgta gtttgctttt tattggatat ctatttatta 60
tatatacata ctttttaatga agcataataa atatatgaga atgtgcacat atcaaagtca 120
caactgtgcc aatttttaca ctgttcactt ttgtaaacia tctcagatc aagaaacaga 180
acattagcaa taagaacata gcaacaaagt gccttctcgt cctccttctt tctagttact 240
gcctgcctct tcaaaaagta cccttgcgtga cttgtaacta ctgactagt ttaatctatt 300
tttggacctt atataaatgg aatcatgcaa ttatatatat atatttattt ttatgactgg 360
cttcttattt tccacattat gtgagcaaga ttcacctata ttgctgtata taggttctca 420
ctacttcata atctatattg tatttcatta tgtcactaca acaagggttcg ctcgag 476

```

<210> 293

<211> 503

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (28)

<220>

<221> unsure

<222> (93)

<220>

<221> unsure

<222> (111)..(112)

<400> 293

```

gaattcggcc aaagaggcct agccattntc ctgcctcagc ctcccagagt gctggggctg 60
cggttgcccg ccgccacgcc cgactaattt ttngtatattt tatttttttt nnagtagaga 120
tgggttttcg ccgtgttggc caggatggtc tcaatctcct gacctcgtga tccacccgcc 180
tcggcctccc ggggtgctgg gattacaggc gtgagccacc gcgcccggcc ttttttagaa 240
ctttctagga atctgttttt ccaattgctt tgtatatcag gctctctgcg tctgtcagaa 300
ctgtactgct atgtataaca ctgtctttaa tgttcacttt tgtgttcaga tatttgtata 360
ttcagttttg ttgactgtag ttttccttaa gggttttctt aaagcaatga ctatttatta 420
tgtttctcta tgttctaaaa cttagtgcac tgttgtctac cttatgctta ctgtatgtga 480
caacttttca gggaaacctc gag 503

```

<210> 294

<211> 264

<212> DNA

<213> Homo sapiens

<400> 294

```

gaattcggcc aaagaggcct acttgctttg tgtatctcat ttaatttggt ataaggtagt 60
actgatttta gcatattaat gcgatttctt ccttggtgtt tgctttggtc tgtgttcaat 120
ccagagagct taaattgtca ttattttggg aagaaaacct gtatttttgt tagtttacia 180
tattatgaaa tttcacttca ggagaaactg ctgggcttcc tgtggctttg ttttcttagt 240
tactttttcc gtgcctgcct cgag 264

```

<210> 295

<211> 218

<212> DNA

<213> Homo sapiens

<400> 295

```

gaattcggcc aaagaggcct aaaagttaaa aataggcttt ttaggaactc actctttaga 60
tatttacatc cagcttctca tgttaaatac ttgtccttaa agggtttgag atgtacatct 120
ttcatttcgt atttctcata ggctatgcca tgtgcggaat tcaagttacc aatgtaacac 180
tgccagcgg gcccgcaat ctccatgtgt acctcgag 218

```

<210> 296

<211> 243

<212> DNA

<213> Homo sapiens

<400> 296

```

gaattcggcc aaagaggcct agtagtaagc agtgtcctca atagcatcct ttaggtaaac 60
tctgagattc atttcattgg gctttttgtt ttattattat ttttctcag tattgtttta 120
tagcatcaca ccaaagtaca gttcagtaaa agcagtctct acctgtctag cttgatagag 180
gtagattttt agagaatcca aggcaatgag taggtaatgt tcatctttca agcagttctc 240
gag 243

```

<210> 297

<211> 299

<212> DNA

<213> Homo sapiens

<400> 297

```

gaattcggcc aaagaggcct attttctttc cctaaatgct tcatctccct acccctcctg 60
cagtgaacct aatgtcctcg atgactccca gggcctggcc gccgaggcca gcctctctag 120
gtacagtgtc aatgtacact gtctattggt gtctgtgctg ggaaactagc tgttccctgt 180
ctcctctgtc tctctgtctt ctctgtctct tctcgccccg tcttaatatc tatttccatt 240
ccttgccctt tgttgttcat gaacatatga gcctggaagt caaagggtga gcaactcgag 299

```

<210> 298
 <211> 221
 <212> DNA
 <213> Homo sapiens

<400> 298
 gaattcggcc aaagaggcct agggtaatat aatgagata tggttttggt attcctggat 60
 tagccatcta ctgggctggc agccctcaca tggctggcct gccctgtctc gtgagatgga 120
 tcagccttga ggtgacctgt caggaaagga catttgggct ggaagtagca gaagcctctg 180
 tgagccatcc ttcaggcaga actagtcagg agcagctcga g 221

<210> 299
 <211> 247
 <212> DNA
 <213> Homo sapiens

<400> 299
 gaattcggcc aaagaggcct aggaattaag gtcaaaactaa ttctcacatc cctctaaaag 60
 taaactactg ttaggaacag cagtgtcttc acagtgtggg gcagccgtcc ttctaataaa 120
 gacaatgata ttgacctgt ccctcttttg cagttgcatt agtaactttg aaaggatat 180
 gactgagcgt agcatacagg ttaacctgca gaaacagtac ttaggtaatt gtagggcgag 240
 cctcgag 247

<210> 300
 <211> 269
 <212> DNA
 <213> Homo sapiens

<400> 300
 gaattcggcc aaagaggcct aatgtaata tgattggaaa aatgatgata gacatgatgt 60
 actttgtcat cattatgctg gtggttctga tgagcttttg ggtcgccagg caagccatcc 120
 tttttcccaa tgaggagcca tcatggaaac tggccaagaa catctctac atgccctatt 180
 ggatgattta tggggaagtg tttgcggacc agatagaccg taagcaagtt tatgattctc 240
 atacaccaaa gtcagctccc ttgctcgag 269

<210> 301
 <211> 159
 <212> DNA
 <213> Homo sapiens

<400> 301
 gaattcggcc aaagaggcct agtcgtccct tctgtttact cctttttttg atatattatt 60
 ttcttgctcc tatctgtatt taatagactt tccctttttc atttcccttc tctactgatt 120
 tgaggatga atactctgtt tctatttggt atcctcgag 159

<210> 302
 <211> 154
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (109)..(110)

<220>
 <221> unsure
 <222> (127)

<400> 302
 gaattcggcc aaagaggcct agtgggggta acggcagctt gaagaaatga ctgttctctt 60

tctgaaattc ataattctat ttctgtgac cccaaccgc aaagggtctnn tttttttgga 120
aagcctnaaa aaaaaaaaaa caccacgct cgag 154

<210> 303
<211> 210
<212> DNA
<213> Homo sapiens

<400> 303
gaattcggcc aaagaggcct aatttaagaa cattgaaatt acatcaagta ctctctcaga 60
ctacagtga ataaaattgc aaatcaactc ctaaaggcat ccccaaacca tacaaataca 120
tgcaaatata ataacttgct cctgaatgat cattgagta acaaggaaat caagatggaa 180
attaaaaaat tatttaaact gagtctcgag 210

<210> 304
<211> 439
<212> DNA
<213> Homo sapiens

<400> 304
gaattcggcc aaagaggcct aggggatgtt tggaagagca gaaatattag ttggttttta 60
atatgtacct tgtttgtact taaaaatagg aaggatgacc tctgttatgt aatggcagaa 120
tgcttagcaa aattttttcc tgcagttatg tagaaaacac agcttttcagt ccataaactt 180
gtatatatag ttaaggagat tgtcaagcaa agtgctaaag gtgccaggag cctatagtaa 240
actgccagag tatttaggct atttcaagag attaggagtt gctcctgata tctctcatt 300
caagccagag ggctcttagg aagaggaaca aaaaatgaag aagaggttat gataaaaaga 360
tttatggata tgacttttgt ctaatcgagc aaaaatctat agatggaaat ctatacgtaa 420
ggcccacaaa gtcctcgag 439

<210> 305
<211> 564
<212> DNA
<213> Homo sapiens

<400> 305
gaattcggcc aaagaggcct atcgagagac tgcagctcga caggaatgct acccagaact 60
gaagcctgtg cagtccatca acgcccaccc ttccaactgc atctgtatca agtttgaccc 120
catggggaag tactttgcca caggaagtgc agatgctttg gtcagcctct gggatgtgga 180
tgagtttagt tgtgttcggt gcttttccag gctggattgg cctgtaagaa ccctcagttt 240
cagccatgat gggaaaatgc tggcgtcagc atcggaagat cattttattg acattgctga 300
agtggagaca ggggacaaac tatgggaggt acagtgtgag tctccgacct tcacagtggc 360
gtggcacccc aaaaggcctc tgctggcatt tgccctgtgat gacaaagacg gcaaatatga 420
cagcagccgg gaagccgaa ctgtgaagct gtttgggctt cctaattgatt cttgagagga 480
ggtttagagg agaggaggcc ccggcagagg tcttccctca tgtggttagt ttggtctggt 540
ctctcggagt ggggtggcct cgag 564

<210> 306
<211> 258
<212> DNA
<213> Homo sapiens

<400> 306
gaattcggcc aaagaggcct acttgaacag tcaagaacaa attaaagttt ccacggcaaa 60
tttgttttca aaatgccgaa ttgcgaaaca attgctggct tcacgtttct gaataccttt 120
aatagtttct ctgcgttgca gtttgaagt ttccttgta tgacacagtc gataaataaa 180
gaaaccagg tgatcaatgt tttcaatgcg atcagtaata accatgtgct catgaatcag 240
ataggactga ggctcgag 258

<210> 307
<211> 352

<212> DNA

<213> Homo sapiens

<400> 307

```

gaattcggcc aaagaggcct agggaaggtt ggttccccgt ctgtctccct gcctcttctt 60
cctctacggg tccctctgct ccacaggggt agaacatcaa tctgtgcgag gaaggccagg 120
cggaggggtgt acccactgcc ttgcactggc cttctcccta gagggccggg aggcaggaag 180
agccatttcc tgtggggcca cagcactggg cacagttaaa agtagcaggg cccagatatg 240
ccttgggact ccagtgtgag cctcgctcct gtttccagct ggaagggaag caccctcttg 300
cccaagacag gacactttgc tgctggggc cagcacctgc tgaatcctcg ag 352

```

<210> 308

<211> 405

<212> DNA

<213> Homo sapiens

<400> 308

```

gaattcggcc aaagaggcct actcaggtca gggaggaggc aggggagtggt ggtctccag 60
acccaacggt gagctcagag caagcttcac gcaggacgct ccgaaacact gtgtggaggg 120
ggctgtgttg tgggcacctt ggggcctgat tctccttctt ccgaacgggc tccttgatgg 180
cctggccaca ggggcagctc cccattggct gttaggacca gagtgtgaag aagaagtga 240
atataaatat gtatacatat ataaatatat ttttaattac atgtcgtgtc acggtggctc 300
cagacatact gtttgcctag tttattccac tgcttgaaag cgcttcctag ccaatctgaa 360
caacaacact ttaagctggt tttctaaatg cagggtgctac tcgag 405

```

<210> 309

<211> 207

<212> DNA

<213> Homo sapiens

<400> 309

```

gaattcggcc aaagaggcct aattggagga cagcccttgg gggttgatga gtgtggcatc 60
gtggccacga tctcagagcc cttggctgct gcagacatcc cagcctacta catcagtact 120
ttcaagtttg atcatgcact tgtccccgaa gagaacatca atgggtgcat cagtgccttg 180
aagggtcagcc aagcaaagaa gctcgag 207

```

<210> 310

<211> 252

<212> DNA

<213> Homo sapiens

<400> 310

```

gaattcggcc aaagaggcct attctggaac actatagtaa aggtatttcc tacttggtctg 60
gcgcccacac tgataacttt ttctggcttt ctgctggctg tattcaattt tctgctaattg 120
gcatactttg atcctgactt ttatgcctca gcaccaggtc acaagcacgt gcttgacttg 180
gtttggattg tagtgggcat cctcaacttc gtagcctaca cgctagatgg tgtggacgga 240
tgcaaactcg ag 252

```

<210> 311

<211> 227

<212> DNA

<213> Homo sapiens

<400> 311

```

gaattcggcc aaagaggcct agtgatttac cattttattc aaaaaaatta gaagaagagg 60
acagaaaatct agttgtcttc aggtccattt tgattgaggt gttattcctt tgtctttgaa 120
ttatatattta ggtagggcgg aatggaaact ttatttggat tgcacatctg attatattgt 180
gaacatcaac cttgggtata ggaaatttca ttatgaggct actcgag 227

```

<210> 312

<211> 188

<212> DNA

<213> Homo sapiens

<400> 312

```

gaattcggcc aaagaggcct ataaaccgtc gattgaattc tagaactgcg ctccagcctg 60
gacaatagag ggagactgtg tctcaaaaaa aaaaaaaaaa aatctgtatg gaggaggtct 120
tacaaatatt agtaaccaca ctttttgttt tttttcttca acttttcagt tttggggcaa 180
cactcgag                                     188

```

<210> 313

<211> 412

<212> DNA

<213> Homo sapiens

<400> 313

```

gaattcggcc aaagaggcct agagcaaaat tactgagttg ctctttatcc ttctgttgac 60
tgtcagacct acatttttcc tcagattgca ttatttgatg cttacattgc attttttttt 120
tcttttgaga tggagttttg ctcttttttc ccaggctgga gtgcaatggc gtgatcttgg 180
ctcactgcaa actccgcctc ccgtgttcaa gcgattctcc tgcctcagcc tcccaagtgg 240
ctgggattac aggtgtgcac caccatgccc agctaatttt gtatttttag tagaaatggg 300
gtttcccggt gttggtcagg ctggtcttaa actcctgacc tcatgtgac caccgcctc 360
tgtctcccaa agtgctggga ttacaggcgt gagccacgac tctaggctcg ag 412

```

<210> 314

<211> 230

<212> DNA

<213> Homo sapiens

<400> 314

```

gaattcggcc aaagaggcct agattaaatt agttaccagt aaataataag tttgttttgt 60
gaatgcatat gtttattgtg tgtttattta tttatttatt ttctgcaggg gacaggctct 120
taagtgatca ctgggtgggc gcctgccaac tccgagtggc tccctcccc acacaaatgt 180
ttattgatct ttttccctcc agtaatgtgt taccaggtgc ttccctcgag 230

```

<210> 315

<211> 259

<212> DNA

<213> Homo sapiens

<400> 315

```

gaattcggcc aaagaggcct aagcttttac agtggactct ggtattttat agttctccac 60
tggcagctga aatacgtgcc acagtctcaa tcggcaggca ggacaactta ggacataatt 120
tattaaaaag cagattcttt tattagatta aatagtaaac aaaatgattc aaataatggg 180
ttattttacat ttctgcaccc ttggagtaaa cacctacttg aagcataaag ctagagaaga 240
aatcaaaacg tctctcgag                                     259

```

<210> 316

<211> 217

<212> DNA

<213> Homo sapiens

<400> 316

```

gaattcggcc aaagaggcct agtgacatca tatgagtttt cccaaaagtt tcctcctaatt 60
ttgcctccta catatctctt cctgatgtc cagaataatt tacggtcctc tccccatcgg 120
gtgtgtgtgt gtttgtttgt ttgttttttg tgactgcgag gaggggagtg gacccctcaa 180
ccatgtgcgt gccccactg ctgccatccc actcgag                                     217

```

<210> 317

<211> 251

<212> DNA

<213> Homo sapiens

<400> 317

```
gaattcggcc aaagaggcct accatcatca tctttgccac tgcattgttt tatgctgaga 60
agggcacaaa caagaccaac tttaacaagca tccctgcggc cttctgggtat accattgtca 120
ccatgaccac gcttggctac ggagacatgg tgcccagcac cattgctggc aagattttcg 180
ggtccatctg ctcactcagt ggcgtcttgg tcattgcctt gcctgtgcca gtcattgcat 240
ccaacctcga g                                     251
```

<210> 318

<211> 239

<212> DNA

<213> Homo sapiens

<400> 318

```
gaattcggcc aaagaggcct atggatatgg tattttatat ttgttttctg tcttgaaatt 60
atagaaaaata aaacgatata aaggcatttt atgggtgtttg ttgatagctt attatattac 120
attgaaaagg aatcaaatcg ctcctcttga ttctaacttc aatatttacc taaatgtttt 180
tttgtgtctgt ccttttatct ctgtttactc tggatatctgc ctgctgtccc ccgctcgag 239
```

<210> 319

<211> 233

<212> DNA

<213> Homo sapiens

<400> 319

```
gaattcggcc aaagaggcct atcgaaaacc tgcacccttg cgtgtcctcc tagaccacaa 60
agaggcccaa gaaaaatcgg attttagtgc ccttactgat gcattatcga aaacctgtta 120
gagtccctaa cggttctctg ttagtattgg gaccttacca ctgtcctata aatatgttat 180
gccccaaaaa tgaagtggag ggccataccc tgaggaggagg aagggatctc gag       233
```

<210> 320

<211> 307

<212> DNA

<213> Homo sapiens

<400> 320

```
gaattcggcc ttcattggcct agctgccctt ctctagttct ggtggccctt ctctaattgtg 60
tctctcttct ttaggcttgt ctgcacacag atgtgctttc tgcttatgaa tttaggagaa 120
ctacatccat aaattacatc acacctttcc tgcctacatg caattttcct agacttcaaa 180
attttacaaa ccagagagat caagatgcac aggcctccac tcgatgtccc ttgctgtatt 240
ctgaggctaa aaagactaac actgatttag tggctgtctg caaggtaaaa gcattgcttt 300
gatcgag                                     307
```

<210> 321

<211> 353

<212> DNA

<213> Homo sapiens

<400> 321

```
gaattcggcc aaagaggcct aattaaagaa ggagaagcaa gcggatttca gagaggttgt 60
tcttcagaaa aaaaatgggt atttctttga actcatgcct gagctttatt tgtttattgt 120
tatgccactg gattgggaca gcatcacctc tgaatcttga agaccctaatt gtgtgtagcc 180
actgggaaag ctactcagtg actgtgcaag agtcataccc acatcccttt gatcaaatat 240
actacacgag ctgcactgac attctaaact ggtttaaatg cagcgggcac agagtcagct 300
atcggacagc ctatcgacat ggggagaaga ctatgtatag gcgcaatctc gag       353
```

<210> 322

<211> 213

<212> DNA

<213> Homo sapiens

<400> 322

```
gaattcgcca aagaggccta gaaaagagag tccttaatgg aatggctgaa ttcattgctc 60
ctactacttt gtttgtatat atatcctcat agtcatcaag taaatgattt ttcttcactg 120
cttaccatgg acctgggacg ggtagatata ttaaatgaat ccagattttc tgttgataac 180
acacctgtca ccaacacgac ccaacttctc gag 213
```

<210> 323

<211> 182

<212> DNA

<213> Homo sapiens

<400> 323

```
gaattcggcc aaagaggcct aattgaattc catatatgac tggcggacgg gtcattgagga 60
tgctggcagt aatactcttg gtagtgtttt ggtttctcat tggctggact tcatctgtgt 120
gccagaattt ggagaaacag atttcactta ttggccaggg gaaaacaccc gatcacctcg 180
ag 182
```

<210> 324

<211> 263

<212> DNA

<213> Homo sapiens

<400> 324

```
gaattcggcc aaagaggcct aggcagcagg tgtggccagt ccctctgcca aggcctgtgc 60
cagagggggt ggccagttgg agcctgggtc agcctcagca gcctatcccc atgtctctta 120
tgccctaatt ttgcttctc atcttggagg gtttggggag aagttggcgt gccaccccca 180
caaccctga ggaggtgtag acccagtctg agagccgcaa gcaactgaggc agggcctgag 240
actggacctg ggtgtcgtc gag 263
```

<210> 325

<211> 230

<212> DNA

<213> Homo sapiens

<400> 325

```
gaattcggcc aaagaggcct aggcgtgtaag tgtaaaatac acaccagatt tcaaagaata 60
aataatgct aaaacaatag tttggatatt aaataccttt ggcctttgca acatttgaat 120
tccaacaacg gatgaacttt atataccatt tgatgaatat catctatttg gataatatcc 180
ttagtattta cagatttaat attccaagtg ttaatgtacc acccctcgag 230
```

<210> 326

<211> 206

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (71)

<400> 326

```
gaattcggcc aaagaggcct agaatgtcac agcatcttga cacaaatttg cctatgcctt 60
tgatttttgt ngttgttgtt gttttttatt ttttgagacc agagtcttgc tctgtcaacc 120
caggctggag tgcagtggcg cgatcttggc tcaactgcaga ttctgcctcc caggttcaag 180
cgattcatgt gcctcagcct ctcgag 206
```

<210> 327

<211> 338

<212> DNA

<213> Homo sapiens

<400> 327

```
gaattcggcc aaagaggcct agtggtgagg agcctttaa ctagagccca cgcttacctg 60
tgaagctgtg acgtctccta atgtgggtgc ttgctgtatt caacttagga catttggttt 120
tactgttaaa ccacggtttt gtttggttgc tacagtttga caacttaaat gctgcgcagt 180
aaacctctaa gttggaaatt gaagctagcc actcagagaa acttgaattg ctaaagaagg 240
cctatgaagc ctccctttca gaaattaaga aaggccatga aatagaaaag aaatcgcttg 300
aagatttact ttctgagaag caggaatggc atctcgag 338
```

<210> 328

<211> 200

<212> DNA

<213> Homo sapiens

<400> 328

```
gaattcggcc aaagaggcct aatcaaagtt gaccgaaaga ttttgaaaat ccttaccagt 60
tgtttgcata atgttaaaagt cttatggtta attttattta ttttatcttg ttctcttgct 120
ggttattggc agactcagtc tttctgtttt cacaaagaac tcatgaagag gacgataggg 180
aaacccacgt gtcactcgag 200
```

<210> 329

<211> 259

<212> DNA

<213> Homo sapiens

<400> 329

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gaattcggcc aaagaggcct aattaattca aagacctgta ctaacattct gaaatatctg 60
ctagccgttaa taaaaaaatt aatgtacttt atgttcttag ctcccacaat ttagcctaaa 120
tatttgcctt agcatgctta tactgaatcc aagcaaacat tgatcatagc gttcctcttc 180
tttattttaa agcgttttta cctttctcag catcctgcaa gttacttctt ccttcctttg 240
ttctcctcta cctctcgag 259
```

<210> 330

<211> 248

<212> DNA

<213> Homo sapiens

<400> 330

```
gaattcggcc aaagaggcct acctaaaccg tcgattgaat tctagacctg cccaaaatat 60
atctggtacc caatttcata gggtccattt tctaaacatt attttataag ctcttatctt 120
tgacgtcatt gcttttactt taggcatcca acatttcctt ctgcactatt gttactgccc 180
tgcccttatg ctttgagaat ctcttcattg ccaagtggaa ccccatgttt tttagaaatt 240
tgctcgag 248
```

<210> 331

<211> 137

<212> DNA

<213> Homo sapiens

<400> 331

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gaattcggcc aaagaggcct aatttagggc cgttttcagt cttgatacca cagagaatgt 60
tgcatattgat aacctacata tgttgtttca tgtgtatagc tgtatgtagc gggtcagtag 120
gtgatgcgga actcgag 137
```

<210> 332

<211> 213

<212> DNA

<213> Homo sapiens

<400> 332
gaattcggcc aaagaggcct actgttaaat tatcctctat taaacatttt tccacttatg 60
gtttcttttc taacttcagc tgccccagcc aagtgccact ctctctttgg tactttgttc 120
cttttagaag tatcttttgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtgtgtgtca 180
tatgcaaatg acaaggcaaa atggcaactc gag 213

<210> 333
<211> 266
<212> DNA
<213> Homo sapiens

<400> 333
gaattcggcc aaagaggcct agaactctgac ctgccagttt tgtttttaga agaacagaat 60
ttagtggatc agtttttttc aggatgcagt atcttttgtt gatcactctt tttcttcattg 120
tacaggctcc aatggctttg ttttaccctg caacttttgg aatcgttgga cagaaaatga 180
cgactttgca gcacagatct cagggcgatc ctgaggatcc tcacgatgaa cattacctgc 240
tgccacaca gagctgtgtt ctcgag 266

<210> 334
<211> 215
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (115)

<220>
<221> unsure
<222> (150)

<400> 334
gaattcggcc aaagaggcct atgagtaaca ggtactgtat gtttagcatt ttgaggaacc 60
accaaactct tctccaaagc agtggtagca ttttacattc ccaccatcag tgcangtggg 120
ttctgattct ctatatcctt gccagccctn gttattctac tggttgtgaa gtgggtatctc 180
aggtgggttt ggtttgcatt tccccccccc tcgag 215

<210> 335
<211> 384
<212> DNA
<213> Homo sapiens

<400> 335
gaattcggcc aaagaggcct aggcagacca actggcccaa aacagagctc cttttcttct 60
ttgttctgcc tggactgggt cttaaacctt ttctcctatc tctttctcct ctgtagtcta 120
aatgttactt tgtcatggaa tgtttaactt gtaacattta tatattgatt aattatacta 180
ttatgtatgg tttacaatat tgactggctt gcgtgcccac agctctgact actgagttaa 240
caggaagtac tgttagctgt ggaagggtata cagatcatca gcagtaaato catacaggcc 300
tgaagcaacc tcaattcttg cctcctcaga agaaagaatt ccactgaggg gcataaggca 360
gaaggagaaa ccgcggatct cgag 384

<210> 336
<211> 207
<212> DNA
<213> Homo sapiens

<400> 336
gaattcggcg ccgcgtcgac tcactctctt cccctttttt acctcatgcc aggtcccaag 60
aagaatcacc acctttggca gaaaatgatg gtaattttta tttattttta tttatatttt 120
tttgagacaa gatctcgctc tgtcaccag gctggagtgc agtggcggtga tcacgggtgca 180

ctgcggcctc aacctcttgg gctcgag

207

<210> 337

<211> 167

<212> DNA

<213> Homo sapiens

<400> 337

gaattcggcc aaagaggcct acaggaacat ctactgggga tgactgttag gcagcttgtg 60
 atgatgtttt ttaaaaaaacc taagtaactt ggggagacag agcatttcaa acccatatag 120
 acacctatca tacctgtata tcccctaata catggcgcaa actcgag 167

<210> 338

<211> 153

<212> DNA

<213> Homo sapiens

<400> 338

gaattcggcc aaagaggcct actcaggact ctctcaatga aactgttttt aaatttttct 60
 ggtagatgct tgcagagcag agagtgggat ttcctggttt tctatggctt ctttgcgtgt 120
 gtctctgtat gtgagttcat accgcaactc gag 153

<210> 339

<211> 184

<212> DNA

<213> Homo sapiens

<400> 339

gaattcggcc aaagaggcct agccaaagaa catctgaggt aggtaacacc tgcattgtgaa 60
 aaactgtgat atgaattctta tttataaaaa agtcataact aaaacccttc tagacccaaa 120
 agttactgtg tgtttgtaa taattctcat agtactattg gaatgctcaa tcagtcaact 180
 cgag 184

<210> 340

<211> 226

<212> DNA

<213> Homo sapiens

<400> 340

gaattcggcc aaagaggcct agtcttctag aagttttata gtttttaggtt tttacattta 60
 gttttcttca ttcttgagtt aatttttgca tatggtacag ggtagggatc aaagttcgtt 120
 ttttggccta tggatgttaa attgtttttg catgactttt tgcaaagacc atcctttctc 180
 cactgaattg tctttgtact tcaaaaatca gttgtccaca ctcgag 226

<210> 341

<211> 231

<212> DNA

<213> Homo sapiens

<400> 341

gaattcggcc aaagaggcct aattttgtat ttgaagatta tttatatcag gtattacttt 60
 gtttttcccg ggatacatct gtgttgagtc actttgcatt caacagtgcc tcgccaccaa 120
 aatcacatcat aagaggaaaa ctaggactgg aagaatatgc tgtcttttac ccaccaaagt 180
 gtgttatccc ttttcatgga ttttcaatgt atgttgcacc acgagctcga g 231

<210> 342

<211> 152

<212> DNA

<213> Homo sapiens

<400> 342

gaattcggcc aaagaggcct aggaaaagat aaaagaaaac tcttgagatt tttgagtgtt 60
 gttggttgtt gttttctccg ttcagtttct ttctttttat aacttggatt atgaaactaa 120
 actttaaccc aaaattaacc ctgttactcg ag 152

<210> 343

<211> 235

<212> DNA

<213> Homo sapiens

<400> 343

gaattcggcc aaagaggcct acctgcccac aaccaactct aataaatttt ataacattac 60
 tagtacgcac agatatatat gaataactaa aaaagtttaa ggaagtata tttaccctta 120
 ctacatatga cacgtgatga tattgtctatt ctattttact cttttttatt ttttcagact 180
 cgggtctcact atgttgccca gactggagtg cagtggctat tcccaggtag tcgag 235

<210> 344

<211> 156

<212> DNA

<213> Homo sapiens

<400> 344

gaattcggcc aaagaggcct attggaacg ttttggaact agatcgtggt gatggctgca 60
 cgacattgtg agtatacca acacctatgg attttaaact ttattttatt atttatttat 120
 ttattttatt atttatttat gacaaagagt ctogag 156

<210> 345

<211> 241

<212> DNA

<213> Homo sapiens

<400> 345

gaattcggcc aaagaggcct agggcacact ctttgctttg cttgcaattc cacactccca 60
 cccatcataa catatttcgg aaaccttatt ccaattgggc cttcaagctc aaatgtcaac 120
 tctacttctc cagaagaagg gtatatttta catattcctt agtggtctag aagttcttca 180
 ttacacccat cctgactgca ctgaaccac catggtatta tcagcaccag gcaatctcga 240
 g 241

<210> 346

<211> 373

<212> DNA

<213> Homo sapiens

<400> 346

gaattcggcc aaagaggcct agtcgggtgt ggtggctcac ttgtgtaac ccagcagttt 60
 gggaggccga ggcagggtga tcacttgagc tcaggagttc aaaaccagcc tgagcaacat 120
 ggtaaaaccc tatctctaca aaaagtacaa aaattagcca ggtgtgattg catgcacctg 180
 caatcccagc tactcaggaa gctgagggag gagaatctct tgaaccagg aggtggagac 240
 cagcctgagc cacatagtga aaccccatct ctacaaaaaa tttaaaaatt agctgtgtgc 300
 ggtaacgcgc acctgtatgc ccagatattg gagggcagtg ggggggtggcg ctgaggtggg 360
 aggatcactc gag 373

<210> 347

<211> 239

<212> DNA

<213> Homo sapiens

<400> 347

gaattcggcc aaagaggcct acgagcatga gtggggattt gtctctcatt ccctgggctg 60
 gaagtacctt cctcctggct ctctgtgagg cccctctctt ttctctgttg tctgttttct 120

accagctcct gcttctccca tggggacttc tctgtcacct ggaatccctc tccccgcacc 180
ccagctgact ctgagctctg ctaactctgt ccacccctgc caggcccttt ccactcgag 239

<210> 348

<211> 192

<212> DNA

<213> Homo sapiens

<400> 348

gaattcggcc aaagaggcct acgagagggg gggagaaaagg aaattaaaaa ctgtgaacag 60
aataacgac gttacttaaa aaatatgatg gtctctacca tgttagtaca ttttttgatt 120
caggtaacgg ttagtagaat gaaacattcc atgaatgaca tgttagttat taagcatgtt 180
agaaacctcg ag 192

<210> 349

<211> 279

<212> DNA

<213> Homo sapiens

<400> 349

gaattcggcc aaagaggcct aggttagtgg tggctgtccc cttcttttag tgggggatgt 60
attagcttca aaatcttcaa cagtgtcttt cttctctggc gactcttctc cagggtgctc 120
catgatcact ccactccctc catctaggat gtgccttaaa gctgggtcct cagggaaca 180
gacggtggtt ccactctcac tgcgtcttag gtctaaatct tctaagtaaa ggatcttggg 240
ctgatgcatg cttttgatga atgttttctc cctctcgag 279

<210> 350

<211> 245

<212> DNA

<213> Homo sapiens

<400> 350

gaattcggcc aaagaggcct acaacatgta aaattagagg agaaatttag gtttagatta 60
attgcatgag aaataaaatt agaggacaaa tgttagtata ttatttttgg aatataaaat 120
taattaaaaat tatattacta tcaacatctt atactatact ttttttttat tttcatgtga 180
gcctctcaac aacctgtaag gcaggcaggg aagggtgtaac tagtattact gcacatcccc 240
tcgag 245

<210> 351

<211> 263

<212> DNA

<213> Homo sapiens

<400> 351

gaattcggcc aaagaggcct agtacgttaa ggtggttggc cgctggccac taaattgttg 60
tagcaccact tgggaaaaga aaagatggat tttctgtcct taagcctctg gaaactacct 120
ttagccttta gagaattgtg agagaaacat gtttgaatat gaactgtga gttcctatgg 180
agaaaaaagg tcaatgtaaa atctagcacc aggatatatt tattagagat atgaattgta 240
ctttcttaca ggagaacctc gag 263

<210> 352

<211> 251

<212> DNA

<213> Homo sapiens

<400> 352

gaattcggcc aaagaggcct accggaagtg tggcttcgtt tacagttcgg cacgtaggac 60
ggagggtagt gcgtctagag acacatatcc ccaacggatt tgacgatggt gttcgggtctt 120
gaatggaaat gtagtcttag gccagtctta ggtttttgaa caggatagta gctatccgga 180
gtcgattgag ggccagagca ggcactgggg ttccgatcct gggcaaatgt tcccacgttg 240

aggggtctcga g

251

<210> 353

<211> 302

<212> DNA

<213> Homo sapiens

<400> 353

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gaattcggcc aaagaggcct actctgtttc aggaagaggt gtcactcttt gcaaaggcaa 60
actcctcttt atctggttac tcttctccca actcttaaat gtatttcttg ccacgttcta 120
ttttagagct tttctctgtt ggagcagcag ccactttttt tgaggcccat ttaaactctt 180
ctccagtcctg tttaggggac ttcagtagtt ctttggtgag catgcacccc acatggtgcc 240
cactgccagg cactggggat gcagagacaa agagttccca ctacccacc acagcactcg 300
ag

```

302

<210> 354

<211> 207

<212> DNA

<213> Homo sapiens

<400> 354

```

gaattcggcc aaagaggcct actttttcta attgatttgt cttttcttat atagtctaga 60
taccaatcct ttgttatgcg agctgcaaaa cctctcagac tgtttttctt tttttctttg 120
tttatgcagt cttgctatct gtcattttct tgcctgtatgt ttttcttggt taggaaatca 180
tcctcatccc aagttcatat actcgag

```

207

<210> 355

<211> 175

<212> DNA

<213> Homo sapiens

<400> 355

```

gaattcggcc aaagaggcct acagtttttt tatgtttatt cctaagtatt tcttacttta 60
agatctctag caaatggaag tgttttttaa ttttcgttta aattttttat tgtttatgga 120
aattcaatta atttttggtg ctgctattgc attgtgcaaa tccactgaac tcgag

```

175

<210> 356

<211> 326

<212> DNA

<213> Homo sapiens

<400> 356

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gaattcggcc aaagaggcct actttaactg ggcaggcgcg tgctctgata aaacatggga 60
attttaatac taaaggaaga aaggagagag gaatttcttg ggacaacaag cagactctgc 120
cacaggcaat gaccacccta accctgggga agatgcagat gccttcccca tcactaatt 180
aattcaccat ttattgagca tggactttgt gccagatatt gtgcacaaca cacaggttct 240
tcctttaggc ctctcctta cagtctagaa ggggcagaca gactgatgaa caccagggt 300
gtcagggtt cctggggctg ctcgag

```

326

<210> 357

<211> 462

<212> DNA

<213> Homo sapiens

<400> 357

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gaattcggcc aaagaggcct aataaaatat atgaagctcc tttttttact ttgctctgtg 60
actggtttta aggtaagttt gttatgttgt tggtagattt tgccaggctt ctcccaacag 120
agtagaagtg atttggcctc ataacttcac agtgggttac cactttgttc tatgttctgg 180
ttttgtaaag gatagtactg gaatttgctg ctgaagacca atattggtgt aactcctgtc 240
agtatattgg taaaatgtag cagaggcagg agtttggatg tttggatggg attcccttag 300

```

gattctacag ccaataaaga tcctatttcc tatgcatgtc ccaggaatca gtaatcctct 360
 ttctactctgt tgggatgagt ctttttttgt ttctgttcag agtggttact aacttcacct 420
 tctttctca aaccgtcgat tgaattctag acctgcctcg ag 462

<210> 358

<211> 220

<212> DNA

<213> Homo sapiens

<400> 358

gaattcggcc aaagaggcct agtttccttt ttagatctgc tactctgttt ggataatgtc 60
 ttattcctta tgttttggtc ccatctttca tggttttatt tttatttata ttttaggttt 120
 tgagacaggg tcttgcctcg ttcaccaggc tggattgcag tgtccaccgt cttggctccc 180
 tgcaacctcc acctcttggg ctgaagcgat cccctctgag 220

<210> 359

<211> 221

<212> DNA

<213> Homo sapiens

<400> 359

gaattcggcc aaagaggcct agttggggga caaattgaaa ctcttgcttc aaaagaaaaa 60
 aaaaaagaat gagaccttct catatactgc tgggtgggaat atatggtaca gatatttga 120
 ataacaattt gttactacct aataatgtca aaatatgtta cagcaccag caatcccact 180
 cctacctaca tgcccttaaa actctcacac atggactcga g 221

<210> 360

<211> 223

<212> DNA

<213> Homo sapiens

<400> 360

gaattcggcc aaagaggcct acttttatca aagtcaaaat aattttattg atatatagag 60
 agccacactc cagctaataa attattgttg ttcattttac agcatctcag atataaaaaa 120
 tttggttgca tcctacatgt ctttttttcc tatcttggtc ctctgtccc ttcctctgat 180
 tcttggtgtc cccctactt ttatttttagg ttcagaactc gag 223

<210> 361

<211> 226

<212> DNA

<213> Homo sapiens

<400> 361

gaattcggcc aaagaggcct aatttttttt tagttcttcc tgttttccag gtaccgttct 60
 cagtgattgg tacttagtag ctcatctcat ttccatgata cctccataag gaaggtatat 120
 tattgtttac attttacagg tgcagaaact gagcacagg gcacaacatt cccaagctca 180
 cacagctaata aagtagagga acatgaagta caaggcctgg ctcgag 226

<210> 362

<211> 457

<212> DNA

<213> Homo sapiens

<400> 362

gaattcggcc aaagaggcct aaatttaata tttgttacaa cattcatgca tatgatcagt 60
 ggattttttt gttgttgttg aggagggtaa attttaaaaa agaattggta tataaaacag 120
 atgcattaaa acagtgggtc ccaacctttt tggcactagg aaccagtttt gtggaagaca 180
 gttttttcat ggacctgggg tgggatgagg tgggtgatgg ttttaggatg attcaactgc 240
 attacattta ttgtgcactt tatttctgtt attattacat tctaataat aatgaaataa 300
 ttatactgct cgccataatg tagaatcact gggaaccctg agcttggttt tctgaaacta 360

catgggtccca tctggagggtg atgggagata gtgacagatc atcaggcatt agattctcat 420
aagaaacagg cagcctagat ccctcccgcc actcgag 457

<210> 363
<211> 356
<212> DNA
<213> Homo sapiens

<400> 363
gaattcggcc aaagaggcct actgtcttca caaaaataaa caaacaaca aataaaataa 60
ataatacctt ttattattta cctctgatct attcctatta cagttccgca ttcagtgtaa 120
tttcccttag gggtaactgc aatttcattt ttttaataata cccaacaaag agctgtagct 180
ccctcctgtc tgcagatcag tggttatagg acagaatata atattctact atgctaactt 240
taccttttac cctttttctta gcacgtgcac acacatgtgt gcacatactg tcagagtcce 300
tattttctct tctctacaca ctgccagtct ctctcccttg tcccgcgcag ctcgag 356

<210> 364
<211> 213
<212> DNA
<213> Homo sapiens

<400> 364
gctaaaccgt cgattgaatt ctagacctgc caccctaaa atatcaagct cattcacttt 60
ttaaaaaaat tcctttcaga ctctatatca caaatgtatg gttttcttgt tttgtttttt 120
gagacagtcg cactctcgcc caggctggag gcagtggcac aaactcagct caccgcaacc 180
tccacttccc gagttcaagc gattcccttc gag 213

<210> 365
<211> 280
<212> DNA
<213> Homo sapiens

<400> 365
ggtcattttt aaaattgggg acccccagat gtcagtattt gtagatattg tctcagggaa 60
ctataagctg ggtgtaggca tttgggaact ggatgaagta atattttgct atgcagactt 120
tcaattaatc catatttgta tttgttttat tttactttat ttttttgaga cagagtctcc 180
caggctgggg tgcagtggta gaatcacagc tcaactacagc cttgacctgt ccggcacgag 240
tgatcctttc acctcggcct cccgagcagc gggactcgag 280

<210> 366
<211> 174
<212> DNA
<213> Homo sapiens

<400> 366
gctcagactc ttggaagggg ctataactaga cacacaaaga cagccccaag aaggacgggtg 60
gagtagtgct ctgcgtaaaa gacagtagat atgcaacgcc tcttgctcct gccctttctc 120
ctgctgggaa cagtttctgc tcttcatctg gagaatgatg cccctcttct cgag 174

<210> 367
<211> 532
<212> DNA
<213> Homo sapiens

<400> 367
catggagttt gggctgagct ggggttttct cattgctctt ttaagagggtg tccagtgtca 60
agtacaactg gtggagtctg ggggcggcgt ggccaacct ggggggtccc tgagactctc 120
atgtgcaaca tctggattca ccttcagtga tttcggcatg cactgggtcc gccaggcgcc 180
aggcagggga ctggagtggc tgtcttttat tcgctttgat tcaagtaatg aaaactatgc 240
agactccgtg cagggcgctc ttgccgtctc cagagacaat ttcaaggaca cactgtatct 300

acaaatgaac agcctgactg ctgacgacac ggctgtctat tactgtgcga ctgggaagat 360
 agcagccgcg ggtaccccat ttgactattg gggccgggga accctgggtca ccgtctcttc 420
 agcctccacc aaggggcccat cggctcttcc cctggcacc cctccaaga gcacctctgg 480
 gggcacagcg gccctgggct gcctgggtcaa ggactacttc cccgaactcg ag 532

<210> 368

<211> 229

<212> DNA

<213> Homo sapiens

<400> 368

ggcctgatcg tgtctgtaga tgaaaccatc aagaaccccc gctcgactgt ggatgctccc 60
 acagcagcag gccggggcgg tggctcgtggc cgcgccact gagaggcacc ccacccatca 120
 catggctggc tggctgctgg gtgcacttac cctccttggc ttggttactt cattttacaa 180
 ggaaggggta gtaattggcc cactctcttc ttaccggagg ccactcgag 229

<210> 369

<211> 350

<212> DNA

<213> Homo sapiens

<400> 369

gagcaggagt acagttctga agataacttc ctttaaaaaa ggaaattcat aaaatatcat 60
 gcatcttcct tttttgacac taatggaaca atttaagtga atttcagagg gaagcagagc 120
 ccctggaaag gctggtgtga taaggggaagg ttaccacagc ttctgtcag gcggtgtgtg 180
 ggagcagaga gtggcattct ctgcatactc ttggggagaa gagggtgtga gacaggctgc 240
 tcagggtctg ggagagagcc aggggaaggg gatggaaggg gaagaacagc ccttcaagag 300
 tctgcagaa attggtggaa gttattttaa cagaagtgtt cgggctcgag 350

<210> 370

<211> 155

<212> DNA

<213> Homo sapiens

<400> 370

ggacatagtc ccagcctggg ttgagagagc aaaaccctgt ctcaaaaaca aaacaaaact 60
 cttcttaa atcaatttta ttgttttaga cagcgaggca ggtatttttt aacacatatg 120
 ccactgctat gttttatatt cgtaccatac tcgag 155

<210> 371

<211> 228

<212> DNA

<213> Homo sapiens

<400> 371

ggttttctac ctaaaagggg aaaattttct ataaaaagat tccacgtccc tctttagaaa 60
 aataaagcta ctttaaaaag ccggtttatt ttgaaaacc caacaggctt ctcaaaaactg 120
 ctgtcattcc taaatacgaa gtcttaaaaa atccacatgt cctcctcagc cagaggccta 180
 tggacagcac aaaatacagg ggaatgtcgt ggtggcggct gcctcgag 228

<210> 372

<211> 268

<212> DNA

<213> Homo sapiens

<400> 372

ggacctctg tgcaagaaca tgaaacatct gtggttcttc cttctcctgg tggcagctcc 60
 cagatgggtc ctgtcccagg tgcagctgca ggagtcgggc cggggactgg tgaagccttc 120
 ggagacctg accctcacct gcactgtctc tgggtgattcc atcagtaatt cttattggag 180
 ctggatcagg ctgccccccg ggaagggaact ggaatacatt ggatatgtct ttacaacg 240

ggacaccaat tccaacccct ccctcgag

268

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<211> 480

<212> DNA

<213> Mus musculus

<400> 373

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ctcaccacat cacctgggtga aacagtcaca ctcaactgtc gctcaagtac tggggctggt 180
acaactagta actatgccaa ctgggtccaa gaaaaaccag atcattttatt cactgggtcta 240
ataggtggta ccaacaaccg agctccaggt gtctctgcca gattctcagg ctccctgatt 300
ggagacaagg ctgccctcac catcacaggg gcacagactg aggatgaggc aatatatttc 360
tgtgctctat ggtacagcaa cctttgggtg ttccggtggag gaaccaaact gactgtccta 420
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<210> 374

<211> 271

<212> DNA

<213> Mus musculus

<400> 374

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tttaaaccaa caattacata ttcttcaaat ctgctttgaa gtaaagactt taccagagga 180
agtaagtcta cacagcagcc aagttagata tactgtcttt ctctctgtaa actatttggtt 240
agaacaggaa ggcaatctac aacaactcga g 271

<210> 375

<211> 423

<212> DNA

<213> Mus musculus

<400> 375

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cctcactttg atgtaagcca cggctctgcc caggtcaagg gtcacggcaa gaaggtcgcc 120
gatgctctgg ccaatgctgc aggccacctc gatgacctgc ccggtgccct gtctgctctg 180
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tctctggaca aattccttgc ctctgtgagc accgtgctga cctccaagta ccgttaagct 360
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gag 423

<210> 376

<211> 333

<212> DNA

<213> Mus musculus

<400> 376

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cgccgccga ggccctgtgg gcaagcggt acagcaggaa ctgatgatcc tcatgacatc 180
tggtgacaaa ggaatctcgc ccttccctga gtcagacaac ctgttcaagt ggggtggggc 240
catccacgga gcagccggca ccgtatatga agacctgagg tacaaactct ccctagagtt 300
ccccagcgcc tacccttaca acgcggtactc gag 333

<210> 377

<211> 271

<212> DNA

<213> Mus musculus

<400> 377

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tttaaaccaa caattacata ttcttcaa atctgcttgaa gtaaagactt taccagagga 180
agtaagtcta cacagcagcc aagtgcagata tactgctttt ctccctgtaa actattggtt 240
agaacaggaa ggcaatctac aacaactcga g 271
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<210> 378

<211> 377

<212> DNA

<213> Mus musculus

<400> 378

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gattcttctg tttattttaca atcctcttga cccaggcagg acacatgcag gccaaaaaac 120
gctatttcat cctgctctca gctggctctt gtctcgccct tttgttttat tttggaggcg 180
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tgcaccagcc cagtcaggat catttctggc cccgcttccc ggacgctctg cgccctttct 300
ttccttggga tcaattggaa aacgaggatt ccagcgtgca catttcccc cggcagaagc 360
gagacgcgga tctcgag 377
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<210> 379

<211> 390

<212> DNA

<213> Mus musculus

<400> 379

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ggattaacag tctggtggga ggcaagccat tgaactgaac cagcaggaaa gtatatatttc 180
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gaggcattgt tttctattat tctctgggtga agccttttcc cagagcatat gtctccgga 300
ggcagtgtgg gttcttgcca agcatcagaa ccagtctcca gggcctccc acgccgatcc 360
atagtactgt acagaccac cggactcgag 390
```

<210> 380

<211> 435

<212> DNA

<213> Mus musculus

<400> 380

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cctgatcatt ttcaagaacc ataggactga ggtgaagcca tgaagtgtct gctgatctcc 120
ctagccctat ggctgggcac agtgggcaca cgtgggacag agcccgaact cagcgagacc 180
cagcgagga gcctacaggt ggctctggag gagttccaca aacaccacc tgtgcagttg 240
gccttccaag agatcggtgt ggacagagct gaagaagtgc tcttctcagc tggcaccttt 300
gtgaggttgg aatttaagct ccagcagacc aactgcccc agaaggactg gaaaaagccg 360
gagtgcacaa tcaaaccaaa cgggagaagg cggaaatgcc tggcctgcat taaaatggac 420
cccaaggggc tcgag 435
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<210> 381

<211> 321

<212> DNA

<213> Mus musculus

<400> 381

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tgctgcacag aaactcgtcc gagagtgaag agaggctgaa gtaatagctc aagtagatac 120
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atgccaacag tataaccaca aatgtcacca gccggcagct aatgtatttc atgattaaat 180
 gactagagtt cttttttgtc ttcaagtact gctccacgat tgggtacttg aagtggcttt 240
 cagatatctc ccacagactc tgccccacat tctcagtcac tcctgggggt ccagggtccgt 300
 ctcttaggtc caaatctcga g 321

<210> 382

<211> 223

<212> DNA

<213> Homo sapiens

<400> 382

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 cagtacagtgc tcagaagcaa attaaagaac ttcgagatca atgtttatct cttcagttat 120
 tacatctgggt cccagcttgg ccatgtacaa catgctgatt cttttcaacg ttttattttc 180
 tttatttagc tttgttgcca aagcttcagc actttctctc gag 223

<210> 383

<211> 258

<212> DNA

<213> Homo sapiens

<400> 383

gaattcggcc aaagaggcct acagaaacat ctcaaggtag ctggtecgcc cccacttccc 60
 catctacctc ttgtcctccc cccaacacca ccaccaccct ggctccctcc cctcatgacc 120
 gccctggatcc tcctgcctgt cagcctgtca gcgttctcca tcactggcat atggactgtg 180
 tatgccatgg ctgtgatgaa ccaccatgta tgccctgtgg agaaatgggc ctacaacgag 240
 tccaagggtc tcctata 258

<210> 384

<211> 207

<212> DNA

<213> Homo sapiens

<400> 384

gaattcgcgg ccgcgtcgac agtgaaattc ggtgttatgt taatggacaa ctggtatctt 60
 atggtgatat ggcttggcat gtaaacacaa atgatatgta tgacaagtgc tttcttggat 120
 catcagaaac tgctgatgca aatagggtat tctgtgggca acttgggtgcc gtgtatgtgt 180
 tcagtgaagc acccaaccca gctcgag 207

<210> 385

<211> 193

<212> DNA

<213> Homo sapiens

<400> 385

gaattcgcgg ccgcgtcgac acaagatgtg gacagctctt gtgctcattt ggattttctc 60
 cttgtcctta tctgaaagcc atgcggcatc caacgatcca cgcaactttg tccctaacaa 120
 aatgtggaag ggattagtca agaggaatgc atctgtggaa acagttgata ataaaacgtc 180
 tgaggatctc gag 193

<210> 386

<211> 212

<212> DNA

<213> Homo sapiens

<400> 386

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 gtaacagatg cataataatc ctaatatcca tattgggtac tcttccctcc tttccaaatt 180
 tgtttagctt tccaccaccc cccagctcg ag 212

<210> 387
 <211> 227
 <212> DNA
 <213> Homo sapiens

<400> 387
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 tgtgtgtgtg ttattttttg agactaagtc ttgctctgtc acccaggtg gagcggggtg 120
 gtgtgatctc ggctcactgc aacctctgcc tcccaggttc aagcaattct cctgcctcag 180
 tctctccct agtagctggg attacaaacg cccaccaccc actcgag 227

<210> 388
 <211> 163
 <212> DNA
 <213> Homo sapiens

<400> 388
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 aagatttctg aaattgaaat attattcaat catcctgcaa tctaggataa gaatgataat 120
 tgctgttaca tcttataaac gatattcttg ggctacgtc gag 163

<210> 389
 <211> 223
 <212> DNA
 <213> Homo sapiens

<400> 389
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 tctgttctgt gagatgtcgc caccctgttt gccatctggg aggatctcac tcttcaatt 120
 taatctgtc tcttccgtta ttttttagt ttctatgtat tttactttta ggacattcct 180
 tggactttgt tctacctctt taattgatga agaaaacctc gag 223

<210> 390
 <211> 185
 <212> DNA
 <213> Homo sapiens

<400> 390
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 aatttccagt ttataatata gtattattaa ttatagtcct tatggtgtac attagatctt 120
 tagacttact cttcttatat atatgtaact ttacatcctt ggacctacat ctcccctgcc 180
 tcgag 185

<210> 391
 <211> 221
 <212> DNA
 <213> Homo sapiens

<400> 391
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 tttgttagac tctaaccttg aagtactaac taagcttgct ataaatatac tgtttctcat 120
 ctttgctgtc taccttggtg ttaattggaga gtcactttgt agaaaaaat atactgtttc 180
 tcatctttgc tgtctacctt gttgttaatg gagagctcga g 221

<210> 392
 <211> 219
 <212> DNA
 <213> Homo sapiens

<400> 392

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 tcaagattca gctgaatctg taggtaaaatt tgagttgtat tgccatctta ataatttta 120
 atcttccaat tcatgagcat ggaatgtttt ttccctttatt taggaattct ttattttttt 180
 ccaactgtgt tttgtagttt ttgtatgcag gttctcgag 219

<210> 393

<211> 155

<212> DNA

<213> Homo sapiens

<400> 393

gaattcgcgg ccgcgtcgac ggggtaagaa gctgccggct gaactaatac tgggttatta 60
 tacttgtttc cttcagaact ctgtgggtcat tgggccatct tctgacattg aactctgcta 120
 tgaagtccaa ggtaaacctc atcctcctgc tcgag 155

<210> 394

<211> 157

<212> DNA

<213> Homo sapiens

<400> 394

gaattcgcgg ccgcgtcgac caaaatttga atcctaagag cttgttacat ataaatatta 60
 acagtttacc ctttatgata tgagctacag atattgtcct cagttgtgtt ttcttttgac 120
 ttgctaatag ttttattctt gccatgcaga gtcgag 157

<210> 395

<211> 231

<212> DNA

<213> Homo sapiens

<400> 395

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 tttaggttaa gtaaaataca tttttttaaa ccactattt tgagcgttca gtggtctgta 120
 acagtggttt ataccataag aactggtatg aagtgggtta ctactagttt aataatagtt 180
 gaagcctggg cgtgggtggc cagcctgta atcccagcgg ggaggctcga g 231

<210> 396

<211> 183

<212> DNA

<213> Homo sapiens

<400> 396

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 ctctttcacc tgggtgtctg ggctcaagct ttcccgccca gcctcacttc ctttgccctt 120
 cctcctgcct ttctcaactg tcccaaggag ggggacctcat tgtgtctccc gtgcacgctc 180
 gag 183

<210> 397

<211> 213

<212> DNA

<213> Homo sapiens

<400> 397

gaattcgcgg ccgcgtcgac gctgccactc ctaaaaatat cagagtgtatt tttttttccc 60
 ttaatcacat aactgtaacc ttctgtctac tcagggcaaa ctaacttta gatgaaacct 120
 aaagaatgga tttttcattt ttactacat ttgactgtaa atacagacag cttgataata 180
 ataacatatg ctgtggaatt ccccaacttc gag 213

<210> 398

<211> 153

<212> DNA

<213> Homo sapiens

<400> 398

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gaattcgcg cgcgctcgac cctgtttttc tattcctcta atcaaatgag aagatgttgc 60
ttgggtttatt tttttttctt tttcttagca aagaagtact ttgagtatgt cctagaacaa 120
tatttttcaa gatgctctcc ctggctcactc gag 153
```

<210> 399

<211> 288

<212> DNA

<213> Homo sapiens

<400> 399

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gaattcgcg cgcgctcgac tctaaaagca agattgatgt attttgtaat tctacagtgc 60
ttacttcagt gttgatgaca gtaataagaa tagtatctat agaataacta gttttaaagt 120
tttttactaa aaattcattc tcaatttaat aactagagag ttacagtatt ttttttcagc 180
atgtatttta gtttgtttta tcaccttaat ctccttaata gtctcgaaa tgtagtactt 240
gttctaacca tactgggata ccacattata ttagcatatg ggctcgag 288
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<210> 400

<211> 203

<212> DNA

<213> Homo sapiens

<400> 400

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gaattcgcg cgcgctcgac acattgcatt aatggtagta caaccttaag tgagtgaag 60
gaatctgaag ttttagaaag taggaaaaaa ttaccacaa cccttaggat attgatcctt 120
ctaaaatatt taatttttta aacacttttc attttgtttt ccatctcatt tcaatgcata 180
ttctttttta cagaatactc gag 203
```

<210> 401

<211> 193

<212> DNA

<213> Homo sapiens

<400> 401

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gaattcgcg cgcgctcgac cttgctgcat acagatctgt tgaaagtctc cgtgcatgtt 60
aaaccatcca ctctgtaggc aagtgtttgt aggtgtcttc actttccaga tgaagtcact 120
gagaagacaa gaggttcaga cacttgccca acctctagta agtgacggag ctgagatcca 180
aacgcgtctc gag 193
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<210> 402

<211> 284

<212> DNA

<213> Homo sapiens

<400> 402

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tatcccccat ttacaaaag aggaaactga ggcacagaga agttgagtga cttgcacaag 120
gtcatactaa taaatagcag agctgggatt tgaaccaga ccacggtcac caaactgtaa 180
agggctcaat ggtcaatatt tttggctttg tagtccatgc agtctctgtc acagtgactc 240
aacctgtctg ttggagcaca aaagcagaca taggccgtct cgag 284
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<210> 403

<211> 168

<212> DNA

<213> Homo sapiens

<400> 403

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gaattcgcg cgcgctcgac taaaaaagta atttagattt aaagttcttt gatgtatttg 60
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atcttctaaa tctttatggt tatgatttgg aataaaatgt gcctaatect gtgttacatt 120
ctgttcttaa atctgaatgc cttctcattt aattctgagg gactcgag 168

<210> 404
<211> 189
<212> DNA
<213> Homo sapiens

<400> 404
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accagtgaa tagaaaattt tattttcatt attatgatag cttattttct atatgtatag 120
atgtattttc tttttcttct ttttttttgg agatggagtt ttgctctgtc gcacaggctg 180
gattctcgag 189

<210> 405
<211> 174
<212> DNA
<213> Homo sapiens

<400> 405
gaattcgcgg ccgcgtcgac gaatccatct ggtcctggtc ctggttctac attttgtagc 60
ttgtgagtat agaggtgttc ataataaggtt ctgggaattt tttgtatttc tgtgagggtca 120
gtggtaatgt cctctttgtc attttctgatt ttgtttattt ggcgtccct cgag 174

<210> 406
<211> 234
<212> DNA
<213> Homo sapiens

<400> 406
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ctaaaatccc taaattctaa aatccccaaa tcacaattct gagagaccaa aatttcaaaa 120
atataattgt ggaataaagt tttaaaaata tttaaaatac atttgttaca attttaaaag 180
aagacttttag agacataata atacatgact gaacacatta taggtccact cgag 234

<210> 407
<211> 196
<212> DNA
<213> Homo sapiens

<400> 407
gaattcgcgg ccgcgtcgac agtagctgag atagagtggg gagcaagatc attgcaagat 60
ctcactactt agcactcaag tagaagaaaa aaaaaaagac cattgaaaga gtgaagtcaa 120
gaaaatgaga ggcagggtga ggggtgatta ccaagaagcg tatgaaaatc cccaagaatt 180
aaaacaggag ctcgag 196

<210> 408
<211> 232
<212> DNA
<213> Homo sapiens

<400> 408
gaattcgcgg ccgcgtcgac agatcacacc accacactcc aacctgggca acgtagaaag 60
gccccgtcta tatttttaat taattaatta attaaagttt ttttttaaag cactcatcat 120
aaaagaatat agcaaaatac caaaaaagga aaaataagcc aataaccaag tcaaaatgag 180
gtgtggagtt ctgactgtgt gtctttgggg cttcttccca tcaccactcg ag 232

<210> 409
<211> 232
<212> DNA

<213> Homo sapiens

<400> 409

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gaattcgcg cgcgctcgac cacacacgca aatacagatt ttctgtccaa agcccaggca 60
gcatttctag atgtggccct ttgggagtaa catgctttcc cagtccttcc acctccatat 120
acttttcttc accctcctgg acagccagag cactctagag cagatatgca aaaagtcagc 180
tcaaatagac caagtagtgc cgaactgtcc caaagcacac gcacctctcg ag 232
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<210> 410

<211> 159

<212> DNA

<213> Homo sapiens

<400> 410

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gaattcgcg cgcgctcgac cctctgctta ctgtgacagt cgatgatgaa tcttgcggtg 60
ccattttctg ctgtgggtaa ctgcgtgcag tgtcttgccct tgctttctct tcttactgtc 120
ccacagcttg gtttcatgtt acaaacagaa aagctcgag 159
```

<210> 411

<211> 230

<212> DNA

<213> Homo sapiens

<400> 411

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gaattcgcg cgcgctcgac cccgccttgg cctcccaaag tagcagtaca tttattaaag 60
aaaactagaa agaagtagtg aggcaaaagc cctctccagt cttacagaca cacacaataa 120
tgattttatt cttttcactc tttttttgtc ttcttgtaag tctttgctg agcttgaagg 180
tcgggagtag tttacacaat catcattatg ttgcatatgc tggctcagag 230
```

<210> 412

<211> 181

<212> DNA

<213> Homo sapiens

<400> 412

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gaattcgcg cgcgctcgac gtttgacgta ttggagtttt tgggtattct attcctgttt 60
gtggtgaact ctctagtcca ctataccttc gtctggtctg aggagtatga taatccaagt 120
gcctgctttt attttcttgt ctgcatgtat tttatatcctc tgttttccca tcacactega 180
g 181
```

<210> 413

<211> 166

<212> DNA

<213> Homo sapiens

<400> 413

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gaattcgcg cgcgctcgac agacctgcct ctactcagtt tggattatc acagtccctg 60
catatgtctt tagtttttcc taataccttt gttcatgctg ttctttcctt ctctgagtt 120
gattaccgcg ctcttcaac tgtactacat tcatacatct ctcgag 166
```

<210> 414

<211> 116

<212> DNA

<213> Homo sapiens

<400> 414

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gaattcgcg cgcgctcgac caaatcatga agcaattttt aaatttttta ttttctcttt 60
atcttatcat ttttctctt cttttttatt ttttaaattt tgagcatacc ctcgag 116
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<210> 415

<211> 301
 <212> DNA
 <213> Homo sapiens

<400> 415
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 tttattttct tcccagggat cacagaagag aaagatgaag agcaaatatt tttcctttac 120
 tttgtgtatt ttctacaaac ttggggcctg ccttggtggc tgtcaaagtg tccttttttt 180
 agagcagaaa gagttgcagg aaaacatgat gtggtgtttc atgcaacata gtggaaatgc 240
 agtttttagt catcaggctg cacttcctct cagtccgcag cccagagct caatactcga 300
 g 301

<210> 416
 <211> 355
 <212> DNA
 <213> Homo sapiens

<400> 416
 gaattcgcgg ccgcgctcgac cctaaaccgt cgattgaatt ctagactctg cccagtgtag 60
 atatctttca caaataagac gatataaaga tattttcaga taggtgtata acattcgtct 120
 aagtcaagat cgacaaacac tgcctgttaa aataagacag aagctggaaa cggaagataa 180
 acctgagaga gaaagcatga ctctggaatc cacctgccat cagagctctc tccagaccag 240
 tgctccttcc ctctctcacc ttctgaatg cctcggcctg gcacctgaac tccccatcgc 300
 tgctgccacc ttccccacc cacttctttc tttttcatgt gtgctactcc tcgag 355

<210> 417
 <211> 177
 <212> DNA
 <213> Homo sapiens

<400> 417
 gaattcgcgg ccgcgctcgac tataattata gctaatagaa ataaaaataa ggaataacca 60
 gaaagaaata taaaggaatc ataaagtga gcagataggt gctaagtga tcctgcttac 120
 aatatttgag ataattctta aagtcattat accagtcttg atatgagggg cctcgag 177

<210> 418
 <211> 151
 <212> DNA
 <213> Homo sapiens

<400> 418
 gaattcgcgg ccgcgctcgac taggatattt tgacataagt gtaggacact tatgaatttt 60
 gccttattat ttgtcaatct tataaaaata tatgttaaga aacttatcta tatctacatc 120
 tttaaaattt atgatgaggg cagggtctga g 151

<210> 419
 <211> 260
 <212> DNA
 <213> Homo sapiens

<400> 419
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 ctgtcttctg ctctgcattc gtagcctgtg gctttgtcat tccctcatct ggaaatggcg 120
 gctgcagccc caggcacaat ggcccgttga ggaagaaggg ggacgatgtg cagtgtcagg 180
 ttattttatc aggaagtctc aaagcttctc agaaatcttc tggttgaatt ctacctgggt 240
 gtcataggcc aggactcgag 260

<210> 420
 <211> 174
 <212> DNA

<213> Homo sapiens

<400> 420

gaattcgagg cgcgctcgac ttcttttagca atttgagaga agttttacta caagtgttat 60
 tttagttttc ttttaaaaag tcagttttaa agttgtataa attaaaaata tttttaaatt 120
 ttttaacaga tgctccccct tcaaccact ctagtatta ccactctact cgag 174

<210> 421

<211> 190

<212> DNA

<213> Homo sapiens

<400> 421

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 acaagccaaa attatctgct ggtgactgga actcacagac agaggcttgc tagccctttt 120
 gcattgattg agaggctttt caaaattaat cattgtctatg atttcaatat ctgttcccc 180
 aaaactcgag 190

<210> 422

<211> 173

<212> DNA

<213> Homo sapiens

<400> 422

gaattcgagg cgcgctcgac tgccatcatc accacgtata cttaggactt acgtgatcga 60
 gttctttttg agcagcttat ttgaaggtaa cctgcagagt taaaatgcat ttggcatcct 120
 tcctaagtag agacaaaaaa tattttcact tgggtgttct gtggtacctc gag 173

<210> 423

<211> 214

<212> DNA

<213> Homo sapiens

<400> 423

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 aaagccacct ggctctggta tcttctctta cagatcacct caacacttaa atctcaaat 120
 tctaacatat acatttctac ttattggcat ataaatggtg gtaaatgtac tacaatcatt 180
 tcatgcaagg cagctgttgt ctacagtctc cgag 214

<210> 424

<211> 170

<212> DNA

<213> Homo sapiens

<400> 424

gaattcgagg cgcgctcgac tgacattcca atcatttagt attttaggac ctgtgaataa 60
 cttccaacaa aattaatgaa taccatatta gtattataaa atattataaa gtaataatta 120
 tatcatctat ataacttcaa agtatgatgt ttatacaaag aatcctcgag 170

<210> 425

<211> 187

<212> DNA

<213> Homo sapiens

<400> 425

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 taatctcctt taaaatttgg aataatatag ttgttagaat aatataataa tcatgcagaa 180
 tctcgag 187

<210> 426
<211> 148
<212> DNA
<213> Homo sapiens

<400> 426
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tgccctgctc tgagcatcaa tgccctgtgc tgttctaaca ttttggtttt tttctgctgc 120
aatttcacgc ttggcccttt cctcgcag 148

<210> 427
<211> 204
<212> DNA
<213> Homo sapiens

<400> 427
gaattcgcgg ccgcgctcgac caaagtgtta ggaacatggc agaaaggtga cacctggaga 60
ccaaatgcag ggtaaggagt actgcagagg tcacagggaa gtcacagaac agtaatacgc 120
tagcaggggc atggggcgtg aagaacagaa gacaggaagc gtttcagaga ctccaaagaa 180
gaaatcaggg ccaaccaact cgag 204

<210> 428
<211> 216
<212> DNA
<213> Homo sapiens

<400> 428
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tttcatggta ttttttactt cataagaaac tatcaaaactc aaccaagag gctttgccac 120
tttgcatctc caccagtaat gtatgaggat tctagtggc cctatcctc acaaattagt 180
attgccagtc ttccaattt tttcctccat ctgcag 216

<210> 429
<211> 214
<212> DNA
<213> Homo sapiens

<400> 429
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gttgacagac atgatgaaag ggaatgtaac aaatgtcctc cctatgattc ttattggtgg 120
atggatcaac atgacattct caggctttgt cacaaccaag gtccatttc cactgaccct 180
ccgttttaag cctatgttac aacaagaact cgag 214

<210> 430
<211> 137
<212> DNA
<213> Homo sapiens

<400> 430
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atctgggtgt ctttacaagt acctttgagt gaagcaagca agctatgttt atccttcact 120
gtctttccct cctcgcag 137

<210> 431
<211> 245
<212> DNA
<213> Homo sapiens

<400> 431
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aagatagctg aaaaagaaca tcaactacctc cttaattctc tcattggaaa tttagtttta 120
 attttctgat gcttaaaact ttctgtgctt cagtttttcc tttttataaa tgtttgatca 180
 tatttaccat ctccctaatt atggtagaca taattatcat aattagggtct agccccagac 240
 tcgag 245

<210> 432

<211> 248

<212> DNA

<213> Homo sapiens

<400> 432

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 ctagaattat cgtttagttc aactttttaa atttatctat aaggaaacta agctctggaa 120
 agatggaaag aaatcttctt agaccaaata agccacataa ggattctgta ttttatttgt 180
 tttgtttttg tttatttttt agtttgtttt ttcatgtaag gatttttaat cttccccacg 240
 gactcgag 248

<210> 433

<211> 203

<212> DNA

<213> Homo sapiens

<400> 433

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 gtcagtattt ctccctgagat agagttaagt tggtttctcc ttcagttaaa gactccttgg 120
 tagtttttgt tagtttcaaa agtcattcag ctattgaaac aatgaaaaca ttacagcatt 180
 tagtttccgt gattgtactc gag 203

<210> 434

<211> 218

<212> DNA

<213> Homo sapiens

<400> 434

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 tattagctac tagtttcatt ttaacttagt taaggaggca taaaatgtta ttaaaggact 120
 tatttttatt tattttattt ttgagacagg gtcttgctct gtcacccagg ctggagtgc 180
 gtggtgtgat cataggtcac tgcagcctta aactcgag 218

<210> 435

<211> 239

<212> DNA

<213> Homo sapiens

<400> 435

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 gggaatttag acccttgaca ttgaaagcta atatctaaat ctgaggtttt catectatca 120
 tgaaattggt agctgggttac tttgtagttt ctactttgtg gttgctactg tgtgcttgcc 180
 ttataggacc tatgggctat gtacttaagt gtgtttttgt ggtagcaggt cgcctcgag 239

<210> 436

<211> 217

<212> DNA

<213> Homo sapiens

<400> 436

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 gaatcaggaa aaaagtttta aaattcattt tttaaaaata agttcagggt ataacattta 120
 agaagtttaa tcttggtttt tcagacttgc agaaaatact ttagaaatgc tgactctaaa 180
 atttatcttt catatgttgc tggtaggtag actcgag 217

<210> 437
<211> 160
<212> DNA
<213> Homo sapiens

<400> 437
gaattcgcgg ccgcgctcgac cttcattgat ctttttctct tcctgcatgg taatgagaac 60
tgcccgtttc acctccttta cctatcattt tcttccttac tgcattttca cagcatgcta 120
tttctctgag atgttccagc aagcaggcca agcgcctcgag 160

<210> 438
<211> 180
<212> DNA
<213> Homo sapiens

<400> 438
gaattcgcgg ccgcgctcgac ccaacctttg ctttggcctt taacaactca gtgttttggg 60
ctaattctta agaggaattt gaggttcaact tgaataagtt agactagttt gaggtgggtg 120
tagctagagg attgaagtcg taccacaaaaa aaaatgtatg tatatgtata tgcctcgcag 180

<210> 439
<211> 211
<212> DNA
<213> Homo sapiens

<400> 439
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aaagcagtc cctctttatt tgtaagttta ctttttttagc ggaaactact aaattatttt 120
gggtgggtta gccaaacctc aaaacagtta atctccctgg tttaaaatca caccagtggc 180
tttgatgttg tttctgcccc gcacctcga g 211

<210> 440
<211> 264
<212> DNA
<213> Homo sapiens

<400> 440
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aatcaaacct gctatttcag cactcctgtt ttttaacttg tgtctttagt gcttggattg 180
gtgggatgtt tcggaatggg cattgtcgcc aattttcagg agttagctgt gccagtgggt 240
catgacgggg gcgctcttct cgag 264

<210> 441
<211> 174
<212> DNA
<213> Homo sapiens

<400> 441
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atgagctacc gcgcccagct gacttgtaca gcttctatgg tgtgctttac atttttcctg 120
cttttgagca tttctgagag gcctcgtgtt ttcttttctt taacaaacct cgag 174

<210> 442
<211> 166
<212> DNA
<213> Homo sapiens

<400> 442
gaattcgcgg ccgcgctcgac tgaggcccgga ggttctggga aggtgtacag gcagttaagt 60

tccgggggatg aagtggactg gcatatctcc atatattcag ttatttatat gtaattttga 120
 aaactttgtt caggaacctt tttgtattga aagaacaaaa ctcgag 166

<210> 443
 <211> 153
 <212> DNA
 <213> Homo sapiens

<400> 443
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 ctctctcagt ttagtgattt tttatttttc ttgagactct ctatgaaata cacatcatc 120
 agatatatgt tgtttagtgt ccaagtactc gag 153

<210> 444
 <211> 236
 <212> DNA
 <213> Homo sapiens

<400> 444
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 ttaatccctt tatattataa agcaggttac acagtgttaa atcactcctt tacacaatct 120
 tttttaaaaa taatttaaga gaagaaatga gaaacatact aataggctctt acatatacct 180
 acatatttat tgtttctagc actctctctt tctttctatgg attcaggcgt ctcgag 236

<210> 445
 <211> 125
 <212> DNA
 <213> Homo sapiens

<400> 445
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 taaaccataa ccatactataa gtaagttaat tatactatat gttagaaagt tctgagacgc 120
 tcgag 125

<210> 446
 <211> 346
 <212> DNA
 <213> Homo sapiens

<400> 446
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 gaacttcagg cctcagttgg ttctagtctc agcattgctt ttcacttaac ttctctgagt 180
 ttcatttcct tccatgataa tgagagaatt gggccctttg acactaaata acactgggtg 240
 ggtggatctg aagacatttt atctgcttat tcttttctact cttatgtctc tgtcaaccgg 300
 attgacagat tctctatggt ttcactctgg tccacaacca ctcgag 346

<210> 447
 <211> 119
 <212> DNA
 <213> Homo sapiens

<400> 447
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 gaagtattac ctacacaaag atgagagtca aagctgaaag aagggatagc catctcgag 119

<210> 448
 <211> 140
 <212> DNA
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<400> 448

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 ttaaaattag attaaatttc cttagatcac ctctaaaaat taaaagaatg gtattagttc 120
 caagtagttt gctcctcgag 140

<210> 449

<211> 190

<212> DNA

<213> Homo sapiens

<400> 449

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 tcaaaacttca ttttgtcgta ttctttttaa aatgtatttt ttgtttaaaa gcataagtgt 120
 tttctactct ttattttgtga tggaaaaata tgagaatcca atagtcaacc aaggtaacgg 180
 aacactcgag 190

<210> 450

<211> 260

<212> DNA

<213> Homo sapiens

<400> 450

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 aggacacaag ttcacaagtg tggacaggaa cattaaactt tctgccagcc gaaatctgtc 120
 aggagcttgg ttcagatttt ttttaactct aaaaagcgtt ttggttcaaa gcagattcgt 180
 taagagtgtg gggagttttt gttttgtttt attttaagct gcattaaact ccaatgtata 240
 tgaaaggggc aatcctcgag 260

<210> 451

<211> 245

<212> DNA

<213> Homo sapiens

<400> 451

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 cagtgtcttt aatttatgag gctttataat ctactttatt gatagactcc agagataggg 120
 aaacatttca tactaacaca agagcaaagg tctttatgaa atatagacat acggtctcac 180
 aagcatcaat atttttgggtg gtgttttttag ttatactgtg tataataaac agagtgaatc 240
 tcgag 245

<210> 452

<211> 155

<212> DNA

<213> Homo sapiens

<400> 452

gaattcgcgg ccgcgtcggt ctctccccag cttccctaca ttcttccatg ctagtctttt 60
 tcatcctctg ggtgtctgca tatgtggccc cttctcatgg cagcttttcc tggccagcct 120
 atggaagtag gtccatcagg caccctctcc tcgag 155

<210> 453

<211> 217

<212> DNA

<213> Homo sapiens

<400> 453

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 ttgggtgttc ctcattctac tgcttatgtt gactatgggc aggaatcttt acctcttaac 120
 ttcatttttt acgtttattg aaatgggtact ttctatttat ctacttatca gtactaggca 180
 gattctgtat aactttcagt ttcaggatcc tctcgag 217

<210> 454
 <211> 249
 <212> DNA
 <213> Homo sapiens

<400> 454
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 gttggatgtc ttttcccaat ggtgctgagt catcccagtc tctgtctttg gtactgctgg 120
 ccctctgggtg ccatagcaat ctgtttctgt tctcttttgc ttttgttggc acccagaaat 180
 ctaacctgtg ctgtttccat tagtgctcca ggcaagacag aaacccatcc cttgggtggc 240
 acgctcgag 249

<210> 455
 <211> 226
 <212> DNA
 <213> Homo sapiens

<400> 455
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 ggtgttacga aaggatctat cacaagctcc gttctcctgg ccggcggggc cactggtagc 120
 gcaggcttgt cagcgggcca ccgcggcctt gcacactcac cgcgaccacc cgcacacagc 180
 cgcttacctc caagagctgg ggcgcctgag caaagtggc ctcgag 226

<210> 456
 <211> 428
 <212> DNA
 <213> Homo sapiens

<400> 456
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 ccagatctgt tctgcaacat tcaccgttct ctgcatccag ctctgcttat ctgctgttac 120
 cttggacacc agagcagcta taggtatctg ccagagctat gaaatcattc agccggatcc 180
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 ctttgggctg tggctttccg gacatggccc accctcttga gacttccct ctgaagggtg 300
 cttctgaaaa ttccaaacga gatcgccctt acccagaatt tcttgggact ccttaccctg 360
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 acctcgag 428

<210> 457
 <211> 451
 <212> DNA
 <213> Homo sapiens

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 aagtaaaggc tgctctctta ggacagcagg aacagggcag cctagcaaga cagaaaattt 180
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 actcctacta caagggcggg atcagagaag gtgagcgggg aatcctgccc tctctctccc 360
 ctccagctgt aatgtcatac agactacaca gggagcctgg actttcactc cacctagcag 420
 taacaaggca cctctctccc atactctga g 451

<210> 458
 <211> 394
 <212> DNA
 <213> Homo sapiens

<400> 458
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caccctttcc agctacctct gctgcccctg agccccaccc ttcacctcc acagcccagc 120
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 agaccctga accagtgtgc ccacagccc ctgagctcca gccttccacc tccacagacc 240
 agcctgtcac ctctgagccc acatctcagg ttactagggg aagaaaaagt agatcctctg 300
 tcaagacccc tgaacacagt gtgcccacag cctttgagct ccagccttcc acctccaccg 360
 accgacctgt cacctctgaa tccaccaact cgag 394

<210> 459

<211> 202

<212> DNA

<213> Homo sapiens

<400> 459

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 tgggattatg tgtgtgagcc acagctcctg gcctcttttt ttgtttttcc tatcccaagt 120
 tgtattacta gttttgggga gtttgcagac aattgaatat tctataggct gtgttgagc 180
 tttgatgga tcgtccctcg ag 202

<210> 460

<211> 126

<212> DNA

<213> Homo sapiens

<400> 460

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 ctcgag 126

<210> 461

<211> 187

<212> DNA

<213> Homo sapiens

<400> 461

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 aacatttgct ttgtttctg ctgaatccct aatctcaaca atctatacct ggactgtcca 120
 gttctctctc tgtgctatct tctctctat ccaagtagaa tgtacgccag gagctcttc 180
 cctcgag 187

<210> 462

<211> 193

<212> DNA

<213> Homo sapiens

<400> 462

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 aagatatata aagatgataa ctaatatagt tatactgagc ctgatcattt gcatttcgtt 120
 agctttcttg attatatcaa tgactgcaag cacctattat ggtaacttac gacctatttc 180
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<210> 463

<211> 224

<212> DNA

<213> Homo sapiens

<400> 463

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 cgttaaattt cacatttctt ttaaagaact cttaaagtgt aacagttacg ccatacttca 120
 taagtggtaa agaaaggat aaaatttgga aacattttgt tgggcatagt agtgattggg 180
 tgaaaaggat aaattatctc aaaatgagaa tgtgcttgct cgag 224

<210> 464
 <211> 151
 <212> DNA
 <213> Homo sapiens

<400> 464
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 aaagaatatg aggcctcattt tacctcttct tctccactc ctagtcttcc tttttatatt 120
 tgacattggc agtagttcca gtacgctcga g 151

<210> 465
 <211> 292
 <212> DNA
 <213> Homo sapiens

<400> 465
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 agttattcag gaaaatagcc taattacatg actctcttct ttactagtaa ttcacatttg 120
 tctggcactt tacaattcat tttgcaataa tgacacaaaa gcacagagag attaaggagc 180
 tttctgaag tctcctcact tgattatcta ttttttctg tctgcctac acaacttcta 240
 cccggttgc accctcagct ccaccatttt gcaccatcaa tctgctcag ag 292

<210> 466
 <211> 178
 <212> DNA
 <213> Homo sapiens

<400> 466
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 ttaattcaaa cgaggggaaa attagatagc attttccct aaagaaatgt taatgttcat 120
 tttgtggtt tgttttcaag tttcaggagc catgtacatc tcagaagcgt tactcgag 178

<210> 467
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 <212> DNA
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<400> 467
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 cttcttttct ttgtgttct ctttaccttc agaggagcag ctccagttcc tctgaaggta 120
 aagagaaaca caagaagtct cgag 144

<210> 468
 <211> 171
 <212> DNA
 <213> Homo sapiens

<400> 468
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 aaagcatttt tactgatttt taaaattggt gctttagata tatttgacta cactgtattg 120
 aagcaaatag aggaggcaca actccagcac cctaattgaa ccactctcga g 171

<210> 469
 <211> 254
 <212> DNA
 <213> Homo sapiens

<400> 469
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 catggaaaag gttgttcgct cagcagctac aagtggagct ggtagcacta cctctggtgt 120

tgtgtctggc agcctcggct ctggggagat caactacatc ctctgtgtcc ttggggccagc 180
 cgcattgccgc aatccagaca tattcacaga agtggccaac tgctgtatcc gcattgccct 240
 tcttgccccc cgag 254

<210> 470
 <211> 181
 <212> DNA
 <213> Homo sapiens

<400> 470
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 ccgagaccta ctaagagcca ctgtgtttcc tgagactgta ccattcccttg cactagagac 120
 ttccaggaact acttctgagc tagaaggccg tgccctcgag ccattacccc cagtcctcga 180
 g 181

<210> 471
 <211> 242
 <212> DNA
 <213> Homo sapiens

<400> 471
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 attttgtcgt gctgttgcgc ggttttcact tggcactgtc ctttaaactc cttctgtgcc 180
 gtgactctgc agtgtctggc agcgtagtag actctactcc ctctatggac gtgacccctg 240
 ag 242

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 <212> DNA
 <213> Homo sapiens

<400> 472
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 ttggtgcaca atagtgtgtg gttgatccag gctttcagcc tggcctgcac agtcaaaggc 180
 tatcaaatgc ctgctgctaa ttcaccctgt acactcgag 219

<210> 473
 <211> 220
 <212> DNA
 <213> Homo sapiens

<400> 473
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 cctacaccag gactgggaag tgcagtacca acaggacacc ccggtggccc cccgctttga 180
 cgtcaatgcc ccggacctct acattccagc aatactcgag 220

<210> 474
 <211> 219
 <212> DNA
 <213> Homo sapiens

<400> 474
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 ccgatgctag ccactagttt gatttttttt ctgttttata gtttgcgctg catggtactt 180
 gtgaagctta aatattttga gtgttctact ggactcgag 219

<210> 475
<211> 144
<212> DNA
<213> Homo sapiens

<400> 475
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ttccgtttcc acatagtact cgag 144

<210> 476
<211> 176
<212> DNA
<213> Homo sapiens

<400> 476
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atgaatctgg ctctaaagta tctattttgc atccatttat atatagatct taaacagaaa 120
tactctaggt tgccacacca cagttttaag aagtatatgt gctgctgtta ctcgag 176

<210> 477
<211> 155
<212> DNA
<213> Homo sapiens

<400> 477
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tgtgtaattct gcatactagt ggagtagcca tggtgaccgt agccacatgg gtgttctggt 120
gctgttttgc aggttcaaac cttgtactac tcgag 155

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<211> 122
<212> DNA
<213> Homo sapiens

<400> 478
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gtggattcat catctatgac acacactcac tgatgcataa actgtcacct gaagctctcg 120
ag 122

<210> 479
<211> 158
<212> DNA
<213> Homo sapiens

<400> 479
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tagcaaagaa gatcttttaa ggagttttgg tagccgaact tgtaggcggt tttggagcat 120
attttttggt tagcaagatg cacacaagcc acctcgag 158

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<211> 109
<212> DNA
<213> Homo sapiens

<400> 480
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<210> 481

<211> 182
 <212> DNA
 <213> Homo sapiens

<400> 481
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 tgtatttcaa aggcattgaa gcagggaagg ttccctatct tctcatgca gataacctcg 180
 ag 182

<210> 482
 <211> 144
 <212> DNA
 <213> Homo sapiens

<400> 482
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 aataaatcaa aggttcgagc tgtacatgca gtactgtga ttttagtgtg tgtaataaaa 120
 tgctgtgaag cacacactct cgag 144

<210> 483
 <211> 194
 <212> DNA
 <213> Homo sapiens

<400> 483
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 cctctcagta tacttactct ttgacctcaa gaagcctcca attccttaac caaccttttc 180
 cccctccct cgag 194

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 <211> 194
 <212> DNA
 <213> Homo sapiens

<400> 484
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 ttcttaaccg catgaagtcc cgggcgaagt tgctctccc attgtggtca ggactcttca 120
 tggcctggac cctctggatg aatttctca ggatctccac ttgtctcatc ctcccgctc 180
 ccccaact cgag 194

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 <211> 228
 <212> DNA
 <213> Homo sapiens

<400> 485
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 agttcatgta tgaaatttga atgcaaaaaa ctaatttctt tagcattcac ttttttattt 180
 atttttcttt attttttaat tttctgtaag ttactgggtt atctcgag 228

<210> 486
 <211> 121
 <212> DNA
 <213> Homo sapiens

<400> 486
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atcttgatcc actaaattta ttgcatgacc tatgaaatgg atcataaccc aaattctcga 120
g 121

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<212> DNA
<213> Homo sapiens

<400> 487
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ctcaaagaga ttcaggacct gcagagtcgc cagaagcatg aaattgaatc tttgtatacc 120
aaactgggca aggtgcccc tgctgttatt attccccag ctgctccctt ttcagggaga 180
agacgacgac ccactaaaag caaaggcagc actcgag 217

<210> 488
<211> 204
<212> DNA
<213> Homo sapiens

<400> 488
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acctattcct gtatggcctt atccaaatcg aaatcacaag aacagaagaa taatgaaaaa 120
acagacaaga gttcattaaa tctcccagaa gttgattcag atgttgctaa gccaaccag 180
gcatgtatct ccacggact cgag 204

<210> 489
<211> 288
<212> DNA
<213> Homo sapiens

<400> 489
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ttactgaaaa tgtgggatta caatgaaact cttaaagtgt gccacataag tcaagggaagc 120
cacctaagtc atgggatggg catgagtgag acactctgga ataactctga tgctactctg 180
ggactgccct tgcaggtggg gacatcagct tcaactaagg gctcaccaga gactccttca 240
agggagcatt tcttggttcc catattgtgt ttatgtcatt tactcgag 288

<210> 490
<211> 266
<212> DNA
<213> Homo sapiens

<400> 490
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ttccgaagcc acttccaggc caaggcagtc gccagggctt cttgtcccca ccttctgaac 120
cttcttcaaa cagtagtaca agctccctc agccagcctg cctgcccagc gagggcccca 180
ggttcaaggt gttggcggg gcggagggca ggggaacggg atccttctcc cgctgcccac 240
caacaccaac actcacacac ctcgag 266

<210> 491
<211> 166
<212> DNA
<213> Homo sapiens

<400> 491
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gtcatttacc attaacacat tagctctcag aagtttgctg ctatttgctc accttttttt 120
ctttgttgc agtgaggaag gctgttctga attgcatgat ctcgag 166

<210> 492

<211> 246
 <212> DNA
 <213> Homo sapiens

<400> 492
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 tatatttggtg tcatgattat tttttgcttg tgtttgaaaa tatattaaag aaaattatat 120
 tttacccta aattcttttag tacagatttc taaaaataa gaacattttc ctgtatagtt 180
 acaaatcac cttttcaaac aaaataaaaa atgtttttta tatcatttat taccagtc 240
 ctgag 246

<210> 493
 <211> 243
 <212> DNA
 <213> Homo sapiens

<400> 493
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 cttcaccaga tattagaatt aggtcacact attgagggtta taatctgaag gttgtgttac 120
 atagaaacca ctttagatta ttatcaactt ggactaggct ttattttata atagcatagt 180
 aagtaatatc tattgtgtca ttttttcaac cattttattc taagatccat gaggtactc 240
 gag 243

<210> 494
 <211> 207
 <212> DNA
 <213> Homo sapiens

<400> 494
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 aagcatttaa gtgcttgga ttttactaaa ctgacttttt tgcaactttg ggagattttt 120
 gaggggagtg ttgaaaattg ccaaacactc acctcttact caaaacttca aataaaatc 180
 acattttcaa gagagagcac cctcgag 207

<210> 495
 <211> 203
 <212> DNA
 <213> Homo sapiens

<400> 495
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 aggaggccag gctcagagct gagatgtggc ctgaaccttc cctgtatcga tcctttaatt 180
 tagaactgtc aagatgtctc gag 203

<210> 496
 <211> 172
 <212> DNA
 <213> Homo sapiens

<400> 496
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 attgctaaag ggaaattttt ctatggtaat gctcttacgg ataattctcg ag 172

<210> 497
 <211> 180
 <212> DNA
 <213> Homo sapiens

<400> 497

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 agagaggaaa aaaagacagg aaagaaaaga aagaaaagga aagaggaaag gaaagggaaag 120
 ggaaaaggaa aggaagaaag aatgcaaaga ttgagaaaaa tgtgggcact gctgctcgag 180

<210> 498

<211> 182

<212> DNA

<213> Homo sapiens

<400> 498

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 atatttggtt tactcagcag gtgtgcctta acctccctat tcagaaagct ccacatctcg 180
 ag 182

<210> 499

<211> 174

<212> DNA

<213> Homo sapiens

<400> 499

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<210> 500

<211> 171

<212> DNA

<213> Homo sapiens

<400> 500

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 tctggagcat ttattgcctt accagaaatg ttagtaggaa atgttctcga g 171

<210> 501

<211> 169

<212> DNA

<213> Homo sapiens

<400> 501

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 tcagggcatt taatccagga actgcgaaga ggatctcaag cagccaatat ttactgcac 120
 aacttcaatc aggatgcggt tgcaattctt gttcccgacc tgcctcgag 169

<210> 502

<211> 332

<212> DNA

<213> Homo sapiens

<400> 502

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 tgctcgggag ctgttccagc aggcgatttt taaatactgc tttctacgcc ctatacaact 180
 tggcttcaca tacttttaca ctaactttat atgattttta aaaactggtc tgatcggact 240
 tctcgtctct ggacactggt tactggagtc tggccggctc tccgtgctcc tcttggtacc 300
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<210> 503

<211> 234

<212> DNA

<213> Homo sapiens

<400> 503

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gaattcgcg cgcgctcgac attcaatttg cattgtaatt cagccactgc caggatgaga 60
tcctacttct ggttttcagc catctcagct ctgcatctat gggacataag ggcagacata 120
gaaacttttg attcattcat gtggtgcttg agctgggaat ttgaatccct gaattcattc 180
ttcttttttc cccactttg tctagtacaa ttaggagcaa caaccactct cgag 234

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<210> 504

<211> 147

<212> DNA

<213> Homo sapiens

<400> 504

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gaattcgcg cgcgctcgac aggacttatg atccaattca caaaagatt aaatgaaacc 60
accctgtgtt ttaaaatata tataatgttc aacctaatgt atatgcaaca ttattcttat 120
tctaattatt tgacagggaa actcgag 147

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<210> 505

<211> 311

<212> DNA

<213> Homo sapiens

<400> 505

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aaggggagaa atgtacttgg aaattaatgt atgtttacat ctctttgcaa attcctgtac 120
atagagatat attttttaag tgtgaatgta acaacatact gtgaattcca tcttggttac 180
aaatgagact ccttcagtc gttatccaaa taaaagcagt tctgaaacta tccctttctt 240
tgttatgggt ggaaggtggg gctccaggcc ttcgcagtct gtggcttata aaatgtgcag 300
aggccctcga g 311

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<210> 506

<211> 207

<212> DNA

<213> Homo sapiens

<400> 506

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gaattcgcg cgcgctcgac gtcacaaatg actttttttt tttcaattaa ggaaaaagct 60
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aacgacagta tgatgcttac tctgctactc ggaaactatt tttatgtaat taatgtatgc 180
tttcttgttt ataaatgcc cctcgag 207

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<210> 507

<211> 374

<212> DNA

<213> Homo sapiens

<400> 507

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caggaaaagt cctctcagta gatgtaacaa caacagaggc ctttgattct ggagtcatag 180
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ggagtttctc tggttttggg tctcccttg acagactctc agctggctct gtagatcaca 360
aagggtcgcg ctgag 374

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<210> 508

<211> 195

<212> DNA

<213> Homo sapiens

<400> 508

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ctgctctttc attgcattac cacttccacc cctgcaaact gattcatcat gatctccagt 120
cccttgatca ctactttctc tctagttttg ggctccctca acctcacttc ctacctgatg 180
gggcctaaac tcgag 195
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<210> 509

<211> 181

<212> DNA

<213> Homo sapiens

<400> 509

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gaattcgcgg ccgcgtcgac caaagtcaag cctccgaagt acctgttgga tagctgtgcc 60
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aagtccttac tgaggagtcc agagaatgtt attgaaacta tttctagtct gcgggctcga 180
g 181
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<210> 510

<211> 160

<212> DNA

<213> Homo sapiens

<400> 510

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ttgtacatct ctcattcatt gttgggggaa aaaaaagcac aactatacct ctttaatgtt 120
atcttcttcc attatccctc tgactcgggt tctccctata 160
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<210> 511

<211> 214

<212> DNA

<213> Homo sapiens

<400> 511

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ggtatcttct aaactagaat tgcacttaat tctaataat aaattttatt attgaattgg 120
taaaaagaga ttggccctcg ttctagcttt gtgactgttg tgctctcata aaaagtctac 180
tatatttatg attgttaggc gctatctgct cgag 214
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<210> 512

<211> 209

<212> DNA

<213> Homo sapiens

<400> 512

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ctcagcctct atgagggaaa tgaatgcccc gagaccagag cccattctg cagctcctcc 120
ctgttttaggc tgtggaaaac tggcctccaa actctgcagt gacaacacaa gatggccgtg 180
aagcaagcct ggcaccagag ggtctcgag 209
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<210> 513

<211> 143

<212> DNA

<213> Homo sapiens

<400> 513

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gaattcgcgg ccgcgtcgac ctcgagtttc aaaacataat agtatacaaa atataaaata 60
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agttctcccc cattattctc gag 143
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<210> 514
 <211> 130
 <212> DNA
 <213> Homo sapiens

<400> 514
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 gttctcgtgc ttcttataaa taatgtattt tacatcttac acttctattg ctattatata 120
 ttgcctcgag 130

<210> 515
 <211> 223
 <212> DNA
 <213> Homo sapiens

<400> 515
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 aagcttttagg taaggagaag aggggtcaag agttaactt agagaccctt tgtctctgag 120
 aagcatcctt ctaagacatt ctgttgagat tcctcagta ctattcctta caactggagt 180
 gggtagaagc cttatgaaaa ttatactgag aacctgcctc gag 223

<210> 516
 <211> 185
 <212> DNA
 <213> Homo sapiens

<400> 516
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 ggaccacatg ttggtgtgga ggagtgtcat tgacagtaag caccaccaggc gtgtgtctgg 120
 gagagcattg ggtatcgctc acttctgcag gtacttggtt tttttctca tggccgaaac 180
 tcgag 185

<210> 517
 <211> 156
 <212> DNA
 <213> Homo sapiens

<400> 517
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 tcacaaatgc ttctgtgtg ccttctttgg tgtgttctgc ctcttctcct gagactgtg 120
 ttctttcaag ttcaggtgga gtctgatctc ctcgag 156

<210> 518
 <211> 213
 <212> DNA
 <213> Homo sapiens

<400> 518
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 ctaccaaata actgtttgtt gtttattgcc ctggtacagt tttgtgcaga gtctttatcc 180
 aaaaataaaa taaatgcaac ccctttactc gag 213

<210> 519
 <211> 196
 <212> DNA
 <213> Homo sapiens

<400> 519
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ttacacagga tactttaagg cagccctgca gagtagcatg catctagctc ccagagtttc 120
 tttatgcatt aatattgcac atgttctcct tacccatgtg ggcaaggcag cccaccagcc 180
 cctcataacc ctcgag 196

<210> 520
 <211> 238
 <212> DNA
 <213> Homo sapiens

<400> 520
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 acggaactat cgcttctctt acgcgtttat tctctccctc tcattctctga cggccttcat 180
 ctctgcctgt gtggtcacc acctgacgtt gcgcgctcag ggaagcaact tctctgag 238

<210> 521
 <211> 197
 <212> DNA
 <213> Homo sapiens

<400> 521
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 aaacagactc tgtgtgtgtg tgcatgtgtg catgtgtggc atatgtgccg tatgtcagta 120
 gcttgacagt tttcaaateg tgcttatatt tttttgcata cacaaatctt tgtgtttgca 180
 aactcagaat cctcgag 197

<210> 522
 <211> 270
 <212> DNA
 <213> Homo sapiens

<400> 522
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 cctgggagag taatggggat tcgagtgtct cgattatctt tgggtggcat cctcgtatta 120
 ttactggtag ctggtgtctt gactgcctta ctcccagtg ttaaagaaga caagatgtct 180
 atgttgcgta gggaaataaa atcccagggc aagtcacca tggactcctt tactctcata 240
 atgcagacgt acaacagaac agatctcgag 270

<210> 523
 <211> 208
 <212> DNA
 <213> Homo sapiens

<400> 523
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 ctcttccct ctcttcacc ttagecctcc tagacctgac atcacttaca gggggactaa 180
 ggtgcaggga acacggccca tgctcgag 208

<210> 524
 <211> 230
 <212> DNA
 <213> Homo sapiens

<400> 524
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 atttgtgtcc taaacattct tcagtgaata taattttatt tcagtcaaac atttatgagg 120
 aaatgagatc acatctttgt cactggatgc tacttgaaga gggagtactt tgtaaccact 180
 ttgatatgct gttatcacca cccctgcc tccgaagggt tctccctata 230

<210> 525
 <211> 641
 <212> DNA
 <213> Homo sapiens

<400> 525
 gaattcgagg cgcgctcgac ctacaagcag cttcccttcc tgctgtacca agtgacaagg 60
 aagtttcggg atgagcccag gccccgcttt ggtcttctec gtggccgaga gttttacatg 120
 aaggatatgt acacctttga ctccctccca gaggtgccc agcagacctc cagcctggtg 180
 tgtgatgcct actgcagcct gttcaacaag ctagggtgct catttgtcaa ggtccaggcc 240
 gatgtgggca ccatcggggg cacagtgtct catgagttcc agctcccagt ggatattgga 300
 gaggaccggc ttgccatctg tccccgctgc agcttctcag ccaacatgga gacactagac 360
 ttgtcacaaa tgaactgccc tgcttgccag ggcccattga ctaaaaccaa aggcattgag 420
 gtggggcaca cattttacct gggtaccaag tactcatcca ttttcaatgc ccagtttacc 480
 aatgtctgtg gcaaaccacac cctggctgaa atgggggtgct atggcttggg tgtgacacgg 540
 atcttggctg ctgccattga agtcctctct acagaagact gtgtccgctg gccccagccta 600
 ctggccccctt accaagcctg cctcatcccc cctaactcga g 641

<210> 526
 <211> 264
 <212> DNA
 <213> Homo sapiens

<400> 526
 gaattcgagg cgcgctcgac ctactttatt ctgataaaac aggtctatgc agctaccagg 60
 acaatggaat ctacgttgac ttttagcaacg gaacaacctg ttaagaagaa cactcttaag 120
 aaatataaaa tagcttgcat tgttcttctt gctttgctgg tgatcatgtc acttggatta 180
 ggcttggggc ttggactcag gaaactggaa aagcaaggca gctgcaggaa gaagtgcctt 240
 gatgcatcat tttagagaact cgag 264

<210> 527
 <211> 244
 <212> DNA
 <213> Homo sapiens

<400> 527
 gaattcgagg cgcgctcgac ggcatctgtg tcgaacacga gtagcagtgg tggaaagtgt 60
 aattggagga agattagac tagtgtatga agaaagcgaa gatagaacag atgacttctg 120
 gtgccatag cacagcccat taatacatca tattggttgg tctcgaagca taggtcatcg 180
 attcaaaaga tctgatatta caaagaaaca ggatggacat tttgatacac caccaacgct 240
 cgag 244

<210> 528
 <211> 273
 <212> DNA
 <213> Homo sapiens

<400> 528
 gaattcgagg cgcgctcgac ccttttttgt gaattgagt ctgtttttgc tttcttcaga 60
 ttccaaatga gagtatacat ttttctttgt ttgatgtgct gggtgagatc tggctttgac 120
 cctgctgggc caaggttctc cagaaaacca ccatatagca gattagatta cagggatgca 180
 aagtttgtgg atgtcatcca ttctgactcc aatgcctatt attttgttct cagtataatt 240
 gttccagata aaactatgat ggggtgaactc gag 273

<210> 529
 <211> 412
 <212> DNA
 <213> Homo sapiens

<400> 529

```

gaattcgcg cgcgctcgac ctttcattta tcatatgact tggtagaaac cgtttttctt 60
accgtataaa acctgagctc tttagtattt ttggaaaatg aaagcacgtt cattgtcgtt 120
ctgttgggtt tccaacagaa cttggttctt gtggttactc aatatttcat tgtgttttagg 180
ccctgtggat ggagagttac caccaagagc tagaaatcag gccaataacc caccagccaa 240
tgctctccga ggaggagcca gccaccctgg aaggcatcct agggccaaca accatcctgc 300
tgcttactgg cagaggggaag agagatttag ggccatgggc aggaacccac atcaaggaag 360
gaggaaccag gaggggcatg ccagcgacga agctagagac caagaactcg ag 412

```

<210> 530

<211> 110

<212> DNA

<213> Homo sapiens

<400> 530

```

gaattcgcg cgcgctcgac cctaaaccgt cgatggaatt ccagtacgtt ttgttgtaca 60
ttttagtctt gtttactttc tcttcattgt taagagtatg caaactcgag 110

```

<210> 531

<211> 257

<212> DNA

<213> Homo sapiens

<400> 531

```

gaattcgcg cgcgctcgac agacaacatc accctagccc aagacatcgc tattagagat 60
acatcacctg gacactaaag cctccacccc agtgacactc tcaaggtgct gacaaaatgg 120
acatggacat ttgttgcttt tcttcttttg aattaggaac tctattgtgt ttctgaatt 180
tactgtctgc ttggcccctg atcctgggtat gttccttgct ctctgccaaa acatgcaccg 240
tccccccac actcgag 257

```

<210> 532

<211> 195

<212> DNA

<213> Homo sapiens

<400> 532

```

gaattcgcg cgcgctcgac tgtattcttg gtcactttct cttgcatagc tatectcatt 60
ccagtattt tcatgggctg cctaagaata ctgaacatac tgacttggtg agtcattggc 120
tcttattcgg tgggttttag cattgacagt tactgggtcca caagcctttc ctacatcact 180
tcgaacgtac tcgag 195

```

<210> 533

<211> 197

<212> DNA

<213> Homo sapiens

<400> 533

```

gaattcgcg cgcgctcgac gttttattta tttgtttttt ttctggctcc tgagtggcaa 60
acaaaggaat tttttatgct ggagatactt tgtattattg atctaagttt aatatcttga 120
cctgtttgat ctgagagtct gttatagata tgtatctatt ttccttctct ccttccttcc 180
cctccttctt tctcgag 197

```

<210> 534

<211> 225

<212> DNA

<213> Homo sapiens

<400> 534

```

gaattcgcg cgcgctcgac ctttaaccag cctcatttaa gttaatcacc tctttaaatg 60
ctcaatctcc aagtacagtc tcattctgag gtccaggagg tttctcaacg taagaattta 120
gggggacaga attcagccc tagcagctgg gcagcaggac tcatgggtcc cagttctcag 180

```

gccccaaagga ctcagagcag caaaggatac gtgacagatc tcgag

225

<210> 535

<211> 177

<212> DNA

<213> Homo sapiens

<400> 535

gaattcgcgg ccgcgtcgac attctagacc agcctcacca gatggaagtt tatgcttatt 60
 ttcttatttc acttggctgt catggatctc atttcttctt tctgtctcat cctctactat 120
 tcacccctct ccatagaccc atccctccct tggctattgg aacaactcaa gctcgag 177

<210> 536

<211> 403

<212> DNA

<213> Homo sapiens

<400> 536

gaattcgcgg ccgcgtcgac cctggagctt aaaaagctgc acgcaagtgt taaacttctg 60
 acaatggcca agaacaaatt aagagggccg aagtcacagga atgtatttca catagccagc 120
 caaaaaaact ttaaggctaa aaacaaagca aaaccagtta ccactaatct taagaagata 180
 aacattatga atgaggaaaa agttaacaga gtaataaaag cttttgtaaa tgtacaaaag 240
 gaacttgac atttcgcaaa aagcatttca cttgaacctc tgcagaaaga actgattcct 300
 cagcagcgtc atgaaagcaa accagttaat gttgatgaag ctacaagatt aatgggtctg 360
 ttgtaataata ctggtgatgc atctaattct ccacacactc gag 403

<210> 537

<211> 247

<212> DNA

<213> Homo sapiens

<400> 537

gaattcagaa cttttcagct ggggaacgag agtaccagtg agtacagctt tacgaggtaa 60
 gtctgatctt gaacttttca aggaaattca agacagtcta tcagaagtaa agtggaatat 120
 gtttggcctt gaatttttct tagtggttaga agcccttttg ttcccttttca catgttatca 180
 agtgggttaag gcagggcgga ttctagatga aattcaggac aatctatcag aagtaaaggc 240
 actcgag 247

<210> 538

<211> 396

<212> DNA

<213> Homo sapiens

<400> 538

gaattcagcc aaagaggcct aaaaaggag aagaaagaaa agaaacctgc tgttggcgta 60
 tttgggatgt ttcgctatgc agattggctg gacaagctgt gcatgattct gggaactctc 120
 gctgctatta tccatggaac attacttccc ctcttgatgc tgggtgtttg aaacatgaca 180
 gatagtttta caaaagcaga agccagtatt ctgccaaagca ttactaatca aagtggaccc 240
 aacagtactc tgatcatcag caacagcagt ctggaggaag agatggccat atacgcctac 300
 tattacaccg ggattgggtc tgggtgtgctc atagttgcct acatccaggc ttcacttttg 360
 tgcctggcag ctggaagaca gatacacagg ctcgag 396

<210> 539

<211> 342

<212> DNA

<213> Homo sapiens

<400> 539

gaattcggcc aaagaggcct acttgtgatc tagtccttgc ctggtaattg tggattaatg 60
 tcagcgctaa tcagccctc aaaggagag aaaagctggg cttttccctt gctgtacctc 120

```

attcagcttt tgatttccat ggccccacca tttatgtgca agatttgcaa tgggtgtcag 180
cttcctctga agaccgagct tgacgcctcc atgccagctg ccgttggaac gcaaagccaa 240
gcaagggtca ggagggaagc tggcccggct gactggagaa tgggaacccc aggactctcc 300
actcatctcg aagggttgtg gtccccccag gaaagtctcg ag 342

```

<210> 540

<211> 249

<212> DNA

<213> Homo sapiens

<400> 540

```

gaattcggcc aaagaggcct atggtagctg ttoggtagat gctctttgct atttataagt 60
gactttaaac cttctcttgg ctgttaagaa atgtgttcta gatttagcta tttattgttt 120
gcggcctgca tgctgaaaca gtgcttacgt tgtctccatg tgtacggggc ctgtgtggat 180
ggtcgtatgt tttgcacatt ttgtagtgtg tgggtgtgct cggcgacac aaaaaagag 240
tacctcgag 249

```

<210> 541

<211> 230

<212> DNA

<213> Homo sapiens

<400> 541

```

gaattcggcc aaagaggcct acagagaccg tggacaacaa aatgatgggt tctatctgtg 60
aacagaagct gcagcacttc agtgctgtct tcctgctcat cctctgcttg ggaatgatgt 120
cagctgtctc acccctgat ccaagtttgg ataatgagtg gaaagaatgg aagacgaaat 180
ttgcaaaaagc ctacaatctg aatgaagaa gacacaggag acatctcgag 230

```

<210> 542

<211> 365

<212> DNA

<213> Homo sapiens

<400> 542

```

gaattcggct aaagaggcct accaactgca gcctccgagc agagaacctg gtccacgtcc 60
acttcaaaga ggagattggc attgctaagc tcatcccgct cgtgaccacc tacatcatcc 120
tgtttgccca catctacttc tccacacgca agatcgacat ggtcaagtcc aagtggggcc 180
tcgcccctggc agccgtggtc acagtactta gctcactgct catgtctgtg gggctctgca 240
ccctcttcgg cctgacgccc acactcaatg gcggtgagat cttcccatac ctggtggtcg 300
ttattgggct agagaacctg ttggtgctca ccaagtcagt ggtatcaact ccagtggacc 360
tcgag 365

```

<210> 543

<211> 366

<212> DNA

<213> Homo sapiens

<400> 543

```

gaattcggcc aaagaggcct aggatattca tcaaggatgg tgcagaagat gctgacctcc 60
cgaggactgt tcctgatact gacaatgctg aacttgtctc aggttcttag tataatgggt 120
gagcagagat gggctattct ctcaactttc cctaaaccaa tggcagttcg ccatgatgct 180
atagtttttc caaaattcgt tactactgat aaaacagtgg atttgccata tttaccctat 240
gatccacccc gagcaccatt aggagaaaat cgctctttac tagaacaggg ttctttatgt 300
tttcaaatta atggaccagg aaattgtatc aacctcacag cccgagcttt gggggtgagt 360
ctcgag 366

```

<210> 544

<211> 365

<212> DNA

<213> Homo sapiens

<400> 544

```

gaattcggcc aaagaggcct acagagatga agcctccctc ccccttgact tgggttttta 60
tttttttctt tctgttagca tctgcatctc taatggatac tgaggggttt ggtgagctcc 120
ttcagcaagc tgaacagctt gctgctgaga ctgaaggcat ctctgagctt ccacatgtag 180
aacgaaatth acaggagatc cagcaagctg gtgagcgctt gcgttccctg accctcacac 240
gcacatccca ggagacagca gatgtcaagg catcagttct tctcgggtca aggggacttg 300
acatatccca tatctcccag agactggaga gtctgagcgc agccaccact tttgaacctc 360
tcgag                                           365

```

<210> 545

<211> 475

<212> DNA

<213> Homo sapiens

<400> 545

```

gaattcggcc aaagaggcct accagcgctg aacaaacatg cagcggctcg ggggtatttt 60
gctgtgtaca ctgctggcgg cggcgggtccc cactgctcct gctccttccc cgacggtcac 120
ttggactcgg gcggagccgg gccagctctt caactacctt caggaggaag ctacgtcaa 180
tgagatgttt cgagaggttg aggagctgat ggaagacact cagcacaac tgccgagtgc 240
cgtggaggag atggaggcgg aagaagcagc tgctaaaacg tcctctgagg tgaacctggc 300
aagcttacct cccaactatc acaatgagac cagcacggag accaggggtg gaaataaac 360
agtccatgtg caccaggaag ttcacaagat aaccaacaac cagagtggac aggtggtctt 420
ttctgagaca gtcattacat ctgtagggga tgaagaaggc aagaggaacc tcgag 475

```

<210> 546

<211> 436

<212> DNA

<213> Homo sapiens

<400> 546

```

gaattcggcc aaagaggcct acaacgtcta aattatgtgc cactcgcgca accatctcca 60
caccatgact ggctgaggg ccccttctcc agctccctcc accggcccg gaaactccgg 120
gggctctggt cccgaaatth tcaccttcca cctctctccc gagcgggccc tgggtgtccac 180
cgcgcttttg aacacttttc gcgggcaccg aaaacgcagc cgaagggtgc tctacccccg 240
agtgttccgg cgccagctac caaccgagga acccaacatt gccaaagagg tcctctttct 300
cctgttcgcc atcatcttct gccagatttt gatggctgaa gaggggtgtg cgcagccctt 360
ggctccggag gatgctacca gcgccgtgac acctgagccc atttctgcgc ccattactgc 420
gcccccggtc ctcgag                                           436

```

<210> 547

<211> 393

<212> DNA

<213> Homo sapiens

<400> 547

```

gaattcggcc aaagaggcct acgcatccac tgccgtccgg tcagacacgc tgaaggctgc 60
gctctgtcga agacttttga tgtgtcgtgc attctcttgc actttctcca gcagctggcg 120
cacctgccgg cagtagttag ccacttttga ctcccggaga aaagatttca gctgtagaac 180
agtaggcaac accaactctg ggaaagcgat ggtgtgggcc tggctgcgca ggtattccag 240
agtaagggtc cacagctgtt ccagcagccc gtcccgttac gccttctcct gcaggttggg 300
gctggacagc ttcaagatca cagagaagt gtatgggcttg gagctcatgc gacctggccg 360
cctattgaag tccacctgct ggaaaatctc gag                                           393

```

<210> 548

<211> 447

<212> DNA

<213> Homo sapiens

<400> 548

```

gaattcggcc aaagaggcct agctgggttaa tcaactcata gatcttgtcc agatacaact 60

```

```

agatgtatta tgacaaataa ctcagcaggg atgtgaacaa aagtttccgg gattgtgtgt 120
tatttccatt cagtattgta aatttactag ggcagcta atgtcaaaaa gtctttttca 180
gtatatgtta cagaattgga tgactgaatt tgaacagacc cttcgaggct tgccatcatt 240
cagggtcaact ccacgcgctt ggacctgtcc ctgaccaaag gattacccaa ttggatctcc 300
tcagcatttt ctttctttaa aaaatgggtg ggattaatat tatttggaga tacactttgc 360
tgtggattag tgttgcttct ttgattggtc tgtaagctta aggcctaac taggagagac 420
aagggtggtta ttgcacaggc actcgag

```

447

<210> 549

<211> 313

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (220)

<400> 549

```

gaattcggcc aaagaggcct aaagaaaggg ggtcgcagaa atggctgggg caattataga 60
aaacatgagt accaagaagc tctgcattgt tggagggatt cttctggttt tccaaatcgt 120
tgcttttctg gtgggaggct tgatcgctcc agcaccaca acagcagta cctacacggc 180
aataaaatgt gtggatgtcc gtaagaacca ccataaaacn agatggctgg cgccttgggg 240
acctaacaag tgtgacaaga tccgtgacat cgaggaagca attccaaggg aaattgaagc 300
aatgagctc gag

```

313

<210> 550

<211> 392

<212> DNA

<213> Homo sapiens

<400> 550

```

gaattcagcc aaagaggcct agaggaaatc tttaagacat ggctggagct aaggcgtacc 60
gacttggagc agttctgctt cttatccact taattttcct catctctgga gccgaagcag 120
cttcttcca gcgaaccag ctgcttcaga aagaaccaga cctcagattg gagaatgtcc 180
aaaagtttcc tagtccagaa atgatcaggg ctttggagta catagaaaag ctcaggcagc 240
aagctcacag agaagaaagc agcccagact acaatcccta ccaaggcgtc tctgttctc 300
ttcaactcaa agaaaacgga gaagaaagcc acttggcagg gagctcaagg gatgcactga 360
gtgaagacga gtggatgagg ataatactcg ag

```

392

<210> 551

<211> 419

<212> DNA

<213> Homo sapiens

<400> 551

```

gaattcggcc aaagaggcct atgagcttat agcttccaag ggccccctt ggctattttc 60
ttctccatc agtcaagtgt ttaattcagt gtaacctacc agtctgtcct gggttgcatg 120
tctagcatac gtggagggtt tttttcactt tcttgacct catgtctgct tctcttgagt 180
ctttgttttt atagcaggaa gttagtattg ggggcttgaa tgatgcaggg caccaacaga 240
accattgcag gactgaaatc ccagactac cgataccttg gtggtcggtt ctcagcttca 300
ctaagaaagc agaacggctg cttatgctga agcctctgtg acagtcaagg gggtcacac 360
ctacattatt gctgccaggg gtcacagccc tgacctttgc cttccagact tttctcgag 419

```

<210> 552

<211> 223

<212> DNA

<213> Homo sapiens

<400> 552

```

gaattcggcc aaactcttta tctgttttgt taaaacatta taattttcct aggtgaggaa 60

```

```

aatgttaggg aaattgagag tgaaggacgg ttctctggcag gtcagggggg ttatttttat 120
ttttatctat ttttttttat tgtttctcct tagctgctgt ctgttcagtt ttgagactct 180
tcagtttcta gctttatatt catacaaagg cgttgcgctc gag 223

```

<210> 553

<211> 289

<212> DNA

<213> Homo sapiens

<400> 553

```

gaattcggcc aacatgacga agttaacaca gtggctttgg ggactggctc tcctgggctc 60
tgccctgggt gccctgacca tgggagcact gggcttggag ttgcctttcc cctgccgaga 120
ggtcctgtgg ccactgcctg cctacctgtt ggtctccgct ggctgctatg ccctgggcac 180
ggtgggctat cgcgtagcta cattccacga ctgcgaggac gctgccgag agctgcagag 240
ccagatcggt gaggcccag ctgatttagc acgcaggggc attctcgag 289

```

<210> 554

<211> 331

<212> DNA

<213> Homo sapiens

<400> 554

```

gaattcggcc aaagaggcct agttttctcg ctatattcca ggctctacag tgtgtttttc 60
tcagtttggg agtttttcag tgtttctcat catattccag gacatacatt ttccaagtca 120
atttttccac gttattcagt ttctccaca cattccaggt catagagtgt ttgtgtctct 180
tttccatggt ttccagtctc ctcccataat ccaggtaacta cagtgtgttt ttttccattt 240
atctcgttat ataccatttt ttaccatatt ccaggtccta ctcttgtgtt tctcattttc 300
catgatttta cattttcatg ccttactcga g 331

```

<210> 555

<211> 391

<212> DNA

<213> Homo sapiens

<400> 555

```

gaattctgcc aaagaggcct accagcaccg ggtgccaggg gccatggagc cccgggcagt 60
tgccggatgcc ttggagaccg gagaggaaga tgcggtgaca gaagctctgc ggtcgttcaa 120
ccgggagcat tctcagagct tcaccttcga tgatgcccag caggaggaca ggaagagact 180
cgcaaagcta ctgggtctcg tcctggagca gggcttgtca ccaaagcacc gtgtcacctg 240
gctgcagact atccgaatcc tatcccaga ccgcagctgc ctggactcat ttgccagccg 300
ccagagctta catgcactag cctgctatgc tgacattacc gtctcagagg aaccatccc 360
acagtcccca gacatggatg tctcctcga g 391

```

<210> 556

<211> 480

<212> DNA

<213> Homo sapiens

<400> 556

```

gaattcggcc aaagaggcct aagacgatca gataccgtcg tagttccgac cataaacgat 60
gccgactggc gatggtggca aaggcaattg aggaggattc tgaatgatgc ggcccatttc 120
tacacctcca aaaatcacct gtccaggatt ggagtaccga ctggagactg ggtactgggt 180
agcagcatca cctgcatgct ctgctgacct tacagctgtt gtctgattgg ttaagacatc 240
caactgcaca ttttgattgg ccagcagggg ctgcaccagc cctatgctct ggggtgggaga 300
cagagcttga gcagagctgt ggattggtgc aatagggatg ttcactgtac agggcgggtt 360
gttttcaggg acacctgatg ctctgtaac tggtaagtca tctcatctt cactgaaaac 420
gtttgggttg aagacaggca ggttaatata gtccatggaa atcttctcaa cttcctcgag 480

```

<210> 557

<211> 406

<212> DNA

<213> Homo sapiens

<400> 557

```

gaattcggcc aaagaggcct agatgaagaa agcacacgtg tttgggatca cgttctcctt 60
caccacaggcc atgatgtatt tttcttatgc tgcttggttc cggttcgggtg cctacttggt 120
ggcacaacaa ctcatgactt ttgaaaatgt tatgttggtta tttcttgctg ttgtctttgg 180
tgccatggca gctgggaata ctagttcatt tgctcctgac tatgcgaaag ccaaagtatc 240
agcatctcat atcatcagga tcattgagaa aacccctgag attgacagct acagcacaga 300
gggcttgaag cctactctgt tagaaggaaa tgtaaaatct aatgaagtcc agtttaacta 360
tcccaccgca cccaacatcc cagtgcctca ggggctgagc ctcgag 406

```

<210> 558

<211> 337

<212> DNA

<213> Homo sapiens

<400> 558

```

gaattcggcc aaagaggcct atctgaatat gcgttggttg gcagctcggg tcaactataa 60
gacttttgatt atcatctgtg cgctattcac tttggtcaca gtacttttgt ggaataagtg 120
ttccagcgac aaagcaatcc agtttcctcg gcacttgagt agtggattca gattggatgg 180
attagaaaaa agatcagcag catctgaaag taaccactat gcccaaccaca tagccaaaca 240
gcagtcagaa gaggcatttc ctccaggaaca acagaaggca cccctctgtt ttgggggctt 300
caatagcaac gggggaagca aggtgttttg gctcgag 337

```

<210> 559

<211> 374

<212> DNA

<213> Homo sapiens

<400> 559

```

gaattcggcc aaagaggcct acctcaacgc caccaccgcc tctcactcc atggccatga 60
gagccgcctg cctcttctcg ctgttcatgc ctggcctgct ggctcagggc caatatgacc 120
tggtatcctct cccccattc cgggaccatg tccagtacaa ccactatggc gaccagattg 180
acaacgcaga ctactatgac taccaagaag tgagtcctcg gacccctgaa gagcagttcc 240
agtcccgaca gcaagttcaa caggaagtca tccagacccc taccacagag ccagcagctg 300
caggggacct ggagactgag cctaccgagc ctggcctctc tgactgccgc gaagaacagt 360
accattact cgag 374

```

<210> 560

<211> 285

<212> DNA

<213> Homo sapiens

<400> 560

```

gaattcggcc aaagaggcct agccgctgcc gtcgccatga cccgcggtaa ccagcgagag 60
ctcgcgccgc agaagaacat gaagaggcag agcgactcgg ttaaggaaag cgccgagatg 120
atgggctttc tgctgccgcc cgcaagcaga gggactcgga gatcatgcag cagaagcaga 180
aaaaggcaaa cgagaagaag gaggaaccca agtagccttg tggcttcgtg tccaaccctc 240
ttgccctccg cctgtgtgcc tggagccagt cccaccatgc tcgag 285

```

<210> 561

<211> 425

<212> DNA

<213> Homo sapiens

<400> 561

```

gaattcggtc aaagaggcct acgaggagaa tggagaccaa acctgtgata acctgtctca 60
aaaccctcct catcatctac tcttcctgtc tctggatcac tggggtgata ctgttggccg 120
ttggagtctg gggaaagctg accttgggaa cctatatctc cctgattgct gagaactcca 180

```

```

caaatgctcc ctatgtgetc attggaaccg gcaccaccat cgtgggtttt ggctcttttg 240
gatgctttgc tacatgccgt ggtagtccat ggatgctgaa actgtatgcc atgttcctgt 300
ccctgggtgtt cctggctgag cttgttgctg gcatttctgg atttgtgttt cgtcatgaga 360
tcaaggacac cttcctgagg acttacacgg atgccatgca ggactacaat ggcaacgaac 420
tcgag 425

```

<210> 562
 <211> 238
 <212> DNA
 <213> Homo sapiens

```

<400> 562
gaattcttca gctgaggaac ggtggtacca ggtgaagaaa atccactttg ggctccgacg 60
cgactgacaa ggaccgtgaa agagcaagat gaaccccaag atgattctcc tgctcctgat 120
gattgagaca gggataagta tacctttgtg ggccatagta agatcatggc cagtaccttt 180
accggtacat tccaattctt ctaccttgcc tttatttttt gcaacagaaa ctctcgag 238

```

<210> 563
 <211> 359
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (203)

```

<400> 563
gaattcggcc aaagaggcct agtttgagca cttcagcctc ttttttgtct gcgtgtttca 60
gatcaacgtc ttcttctaca cagttccatt agccatcaaa ttaaaggagc atcccatctt 120
cttcatgttc attcagattg ccatcatctc tatcttcaag tctatccaa ctgtggggga 180
tgtggccctc tacatggctt tcnttccctg tgtggaacca tctctacaga ttctgcgga 240
acatcttctg cctcacctgc atcatcatcg tctgtctctt ttcttcctg tgtggaacca 300
tctctacaga ttctgcgga acatcttctg cctcaccggc atcatcatcg tccctcgag 359

```

<210> 564
 <211> 399
 <212> DNA
 <213> Homo sapiens

```

<400> 564
gaattcggcc aaagaggcct agctttggte tggaccgagc ggggcagcgt cccgggctcc 60
cgagtgtctc ccatggcgga tacgaccccg aacggccccc aaggggaggg cgctgtgcaa 120
ttcatgatga ccaataaatt ggacacagca atgtggcttt ctgcctgtt cacagtttat 180
tgctccgctc tgttcgttct gcctcttctt gggttgcatg aagcagcgag cttttaccag 240
cgtgctttgc tggccaatgc tctgaccagc gctctgaggc tgcacagag attacctcac 300
ttccagttga gcagagtgtt cctggctcag gccttggttag aggacagctg ccactacctg 360
ctgtattcac tcatcttctg caactcctac cccctcgag 399

```

<210> 565
 <211> 373
 <212> DNA
 <213> Homo sapiens

```

<400> 565
gaattcggcc aaagaggcct aggcgacaag agtctggagg tggcgggtatg gaatccatt 60
aaggtgcgat tgggagttag ccgagtctct ttgaccaggc tagagcgcca gcgtcctct 120
gaaccggcac actttggcaa agttgcaatg gcctgtttgc ttaggcactg aagtggatga 180
tgggttaggat gacaacttgc agagaacgag gatgagacct tcagtttgtg cccacactca 240
tttgagcaa ccctaacaga gattgtgaag attttcaaag tggggcacct cgatttctcg 300
aatctgtggt gtggcgaaata tccgtgttcc tctgtcttaa ctagcctgtt tgaaggcaca 360

```

gttcattctc gag

373

<210> 566

<211> 133

<212> DNA

<213> Homo sapiens

<400> 566

gaattcgcgg ccgcgtcgac gctcactca attcatgctt ttctctccag cagtgatgaa 60
 ctgctgggct ctgactaaac acttgatgtt atttcaagct gttgaccttt gtcattttct 120
 caacctctc gag 133

<210> 567

<211> 281

<212> DNA

<213> Homo sapiens

<400> 567

gaattcggcc aaagaggcct acttttcccc actgcaaac caggctcggc ttccctcgtg 60
 ctcactacc tatagtgtat ctgagggtata ttttgacgt gttttcttac atggtaata 120
 acatgctcgc cctcaccatt ttctctcatt tattttccct tcgccttaatt ttattttgcc 180
 ttgcactttg cacttgcctg aaagggatga ggataccaaa gggggaaaat tcacctgttt 240
 tagggggaaa ttctctctatt ttatgaatg gtgcactcga g 281

<210> 568

<211> 624

<212> DNA

<213> Homo sapiens

<400> 568

gaattcggcc aaagaggcct acctcccggc tgcgcgggt gccctggatc cagtcggctg 60
 caccaggcga gcgagacct tccctgggtg aggcctcagag ttccggcagg gtgcacccgg 120
 cctgtgtgtg gcgcgaggca ggggaagccg taccggggtc ctggccccag cgtgacgtt 180
 ttctctcccc ttctctctct ctccgcgggt gcggcgtcgc agacgctagt gtgagcccc 240
 atggcagata cgaccccgaa cggcccccaa ggggcggggc ctgtgcaatt catgatgacc 300
 aataaactgg acacggcaat gtggctttct cgtttgttca cagtttactg ctctgctctg 360
 tttgttctgc ctcttcttgg gttgcatgaa gcagcaagct ttaccacacg tgctttgctg 420
 gcaaatgctc ttaccagtgc tctgaggctg catcaaagat taccacactt ccagttaagc 480
 agagcattcc tggcccaggc tttgttagag gacagctgcc actacctgtt gtattcactc 540
 atctttgtaa attcctatcc agttacaatg agtatcttcc cagtcttgtt attctctttg 600
 cttcatgctg ccacagcact cgag 624

<210> 569

<211> 467

<212> DNA

<213> Homo sapiens

<400> 569

gaattcgcgg ccgcgtcgac gtgctgggac atgagatgta ttctcttctt tgttcctcac 60
 tctatctctg tgggtggaaa aaattactcc cattctatag aagagagacc agaacctccg 120
 agaggacaag caactttctt agggggcaca gctaggaggg taggctgaat aatgatcccc 180
 ctaaaatgtc cacattctaa tcccaaaaac ttatttaaaa agggactttg caggggtgac 240
 tgagttaagg atcctcagat gaggagggtt tcatggattg tttgggtggg cccaatgtaa 300
 tccaaggatc ctttcaagag caaggcagga gggccagagt cagagaaaca gacacgacaa 360
 tggaagcaga ggttgggggtg atactggagt gggaggggcc accagccaag gaatgcaggc 420
 agcctctagg agctggaaaa ggcaagaaag catgtttcct cctcgag 467

<210> 570

<211> 269

<212> DNA

<213> Homo sapiens

<400> 570

```
gaattcgcgg ccgcgtcgac gctgggggaa aaaagaaact aaatcaaata aaaataaatt 60
ttcaaatttc atcaacaagt ggtacattca gtataaaact acaaagccc atatagatta 120
ttacaaaggc acataccaat caagaactag gcacacacac caggaactgt gcatacatat 180
taaatacattc attacagatt ttacttttat tgtgaagtat attcaataaa atataagtga 240
cagaaatgag aaaatccaca gtcctcgag 269
```

<210> 571

<211> 208

<212> DNA

<213> Homo sapiens

<400> 571

```
gaattcgcgg ccgcgtcgac ataaaaagta tagtaaatat ataaaccaat aacatagtca 60
cttattatca ttatcacata ttatgtactg tgcactgttg tacgtgtgtg acttttatac 120
agctggcagc acgggtttgt ttgcaccagc atccccacaa acatatgagg aacatgtaca 180
tcttaccacg gttgcaactt cactcgag 208
```

<210> 572

<211> 178

<212> DNA

<213> Homo sapiens

<400> 572

```
gaattcgcgg ccgcgtcgac tccctactga agatagcttt gcttgaatga gcttgctgc 60
agtgcgaatg ctggggctta ttgtgttgac ggcgcagtcg ccatggttgc tgcgtcctga 120
ggacatggtt acttccctga ctatctgtca tgccctcactg gtaccccgta gcctcgag 178
```

<210> 573

<211> 172

<212> DNA

<213> Homo sapiens

<400> 573

```
gaattcgcgg ccgcgtcgac tgccagagag tttatagtag ttgaatatgg attatgaaca 60
gttactttta tttttaattt tttgggggac ggaatcttgc tctgtcaccg aggcaggagt 120
gcagtgggtc gatctcagct cactgcagcc tctgcctcct gggttcctcg ag 172
```

<210> 574

<211> 183

<212> DNA

<213> Homo sapiens

<400> 574

```
gaattcgcgg ccgcgtcgac tgcttttga ggacagagtg aatttctccc aaattactgt 60
cttctgcttc ctaaatcagg accacatttt tcagggtgtgc ttatttgggg aacgaggcct 120
ggctgtgtgt ccgctgtatt gctgatgaag ctaaaaatta agggattaat ggcacccctc 180
gag 183
```

<210> 575

<211> 224

<212> DNA

<213> Homo sapiens

<400> 575

```
gaattcgcgg ccgcgtcgac cctttttcag tattgtttca ggaaatggta ttgtttgttt 60
ttattttact ttttactgtt tcctgggtac atgaccaatg tcatttgact ggtgagtaca 120
ttgagctagc agcttttagag aaatttcatg gtgatctaga gatgcagac agctccctgc 180
```

actggcagcc tactttacaa ctaccatctg agaagggact cgag

224

<210> 576

<211> 249

<212> DNA

<213> Homo sapiens

<400> 576

gaattcgcgg ccgcgctcgac cagaaaacca atgtttaaca ttcacagagg attttactgc 60
 ttaacagcca tcttgcccca aatatgcatt tgttctcagt tctcagtgcc atctagtatt 120
 cacttcactg aggatcctgg ggctttccca gtagccacta atggggaacg atttccttgg 180
 caggagctaa ggctccccag tgtggtcatt cctctccatt atgacctctt tgtccacccc 240
 aatctcgag 249

<210> 577

<211> 251

<212> DNA

<213> Homo sapiens

<400> 577

gaattcgcgg ccgcgctcgac catcctttgg gacttcagtt cctgcttttc tttgtgaatt 60
 tttccctatt cgtatcctgt ccatattcct aagcaatata taccgtaggt ttgcctgtat 120
 ttaaaagtgg catcatgtcc ttacgttat tccagtttgc ttttttgta ctcagcatta 180
 tatcttggga tacatccatg ttgatgcagg cagctgaggg tcatttactt tttcccact 240
 gcaaactcga g 251

<210> 578

<211> 161

<212> DNA

<213> Homo sapiens

<400> 578

gaattcgcgg ccgcgctcgac agaggttggc cgccgcttga gagttaagcg aagtgtgggtg 60
 gcttccaagg aatacaaaaca taaaggcctt cgaccgttgc aaatagacta aagtgaaaac 120
 aaatctgaat gaagatgaag ttatttcaga cggttctcga g 161

<210> 579

<211> 173

<212> DNA

<213> Homo sapiens

<400> 579

gaattcgcgg ccgcgctcgac gcacgcactt catctggggc tgcagtgaag aagtattcta 60
 gttggagtgc tgcaaaacca gccttaatga tctttggcaa agcactttgt gtcagtgttc 120
 cttccagata cttctgtctc tctcagcac tcaattcttg caactgctc gag 173

<210> 580

<211> 160

<212> DNA

<213> Homo sapiens

<400> 580

gaattcgcgg ccgcgctcgac agatgcccat gaattcttaa attacctact aaatacaatt 60
 gctgatattt tacaagaaga gagaaagcag gaaaaacaaa atggtcgttt acctaattgt 120
 aatattgata atgaaaataa taacagcaca cccactcgag 160

<210> 581

<211> 262

<212> DNA

<213> Homo sapiens

<400> 581
 gaattcgcg cgcgctcgac tgaattctag acctgcctcg agccgtgcta ttactttcac 60
 ctctttcatt gcttggtgaa aaaccttat ccagggaaga attaataact tcaacaatac 120
 tatcaaagga gggcctaaaa ttaaaaaaaa aaaagaaaca aaaaagtgtg gaaacaacaa 180
 caacaacaat acttggaaca ctctgacag acttagggag aatattatga tattgaggct 240
 gctgttgact aaggcactcg ag 262

<210> 582
 <211> 175
 <212> DNA
 <213> Homo sapiens

<400> 582
 gaattcgcg cgcgctcgac ggatttttca ttactacatc tgaaaagctt ctcacttaga 60
 aggtatttat ctcaaaattc atttggtgtg ttcaaacaga atttcacaaa attctgggtc 120
 ttaacaataa ataattgtga ttctaaacat cagaattgta acaggaatac tcgag 175

<210> 583
 <211> 179
 <212> DNA
 <213> Homo sapiens

<400> 583
 gaattcgcg cgcgctcgac gagatatctg tatttaaaaa aaagggtttt tttccttaaa 60
 tgtgcaaaac agcacagggc agtttagggc tcttcatagc tatcttcacg tacacattta 120
 tttggcttac gagcactctt ctctctcagc ttttcccatc cctatcgcc accctcgag 179

<210> 584
 <211> 242
 <212> DNA
 <213> Homo sapiens

<400> 584
 gaattcgcg cgcgctcgac aggagctgct gtggagaaaag gtatactatg aagttatcca 60
 gcttatcaag actaacaata agcacatcca cagccggagc actttggaat gtgcctacag 120
 gacgcacctg gttgctggta ttggcttcta ccagcatctc cttctctata tccagtccca 180
 ctaccagctg gaactgcagt gctgcatcga ctggaccatc gtactgacc cccatgctcg 240
 ag 242

<210> 585
 <211> 240
 <212> DNA
 <213> Homo sapiens

<400> 585
 gaattcgcg cgcgctcgac ccagaaaaga aaagatagtg atttaacaaa cttttcctgc 60
 tcacctacat tgtcttcatt catatttatt agaattgacca acatacttta ccattccttc 120
 aatcacttta atttcattat gtttggttaa tttttcttct tgataaacca gttgtccctc 180
 agtatactcc agggattcat tccaggagca cctgtgtata ccataattca cactctcgag 240

<210> 586
 <211> 177
 <212> DNA
 <213> Homo sapiens

<400> 586
 gaattcgcg cgcgctcgac cactttcact gggccagaca gaaaacaaga aatctttttt 60
 gtgttggaac atcaaagagg catgctttta cagaaacttg ctttgagat tcttcacctc 120
 gtgctggtca tgatactttc agtccatcac caaggagggg taaaatacac tctcgag 177

<210> 587
<211> 147
<212> DNA
<213> Homo sapiens

<400> 587
gaattcgagg ccgcgtcgac gatttttctg gggggaggat tggtttatgg aacgaattat 60
ttcttatttt tcatggcaac ctacaaattg acttcctttg ttctcatcac cgtctttgtt 120
gttagaatat gttcagagag tctcgag 147

<210> 588
<211> 288
<212> DNA
<213> Homo sapiens

<400> 588
gaattcgagg ccgcgtcgac accaaataga actgtaaaca gtttgtcaac taataagctg 60
aatttctggt tgaagtacag ttggaacagg ttatctccac atttgggtct tttacctctt 120
agcatagtgt gattttcttc ctctttttta aaaatccacc tcttctctct ctacatagtt 180
gtgatttctt taaatctttt ttatcttatg ctaaatgtat gggttttttg tttgtttgtt 240
tggctctact ctgtcaccga ggctgaagtg ttcagtggcc gtctcgag 288

<210> 589
<211> 210
<212> DNA
<213> Homo sapiens

<400> 589
gaattcgagg ccgcgtcgac cttcatgata tggctttacc tctcaggact ccccccatcc 60
ttaccattgt ttgttgatct ctggtgcagc caaatgaagc ccatcatgct tgtcctctgc 120
ctggaagctc ttcttctcct ctctctggcc aatggctact gtcccttcag agcacctgtt 180
cagatgaaac ctccaccaag caccctcgag 210

<210> 590
<211> 229
<212> DNA
<213> Homo sapiens

<400> 590
gaattcgagg ccgcgtcgac ccgggtagta ttccatcata tatatataat cagatatata 60
tacataatca gatatatata tatataatca gatatatata tatcagtttc tttatccact 120
catttgcaat tatttaattt ttaaataaaa cactttataa acacataaaa ttatgagatc 180
tctagttata tttctcatgc taagccactg tgcttaccac tgctcgag 229

<210> 591
<211> 152
<212> DNA
<213> Homo sapiens

<400> 591
gaattcgagg ccgcgtcgac ctccattctt tcatgtgtag gtttaattatt gtggacccaa 60
tctgtgttct ggtaattgga ttaattgga taacatcatt agggctgggc acagttgtct 120
atgcctataa tcccagcact gaaaagctcg ag 152

<210> 592
<211> 175
<212> DNA
<213> Homo sapiens

<400> 592

gaattcgcg cgcgctcgac caaagattcc tacccaatcg tgtacacact gtctctaate 60
tcctctcttt gcttgacctg gacctgtgaa tatgataatc acgcccttga ctgctttact 120
tagtatagga ctccatttta gcagaatgaa gagtgtttcc cctactgato tcgag 175

<210> 593
<211> 235
<212> DNA
<213> Homo sapiens

<400> 593
gaattcgcg cgcgctcgac tctgtattct aatgaatagt aatagctgac attaatgaga 60
actgtatttc agacaccgtg ctaagtctct ttcatgtatt atctcattta atctttgtaa 120
caaattgatg aggtgggtca tatttttatt tatttattta tgtttgagac agggctcttc 180
tctgtctgct aggcctggagt gcaatggagc tatcactcct cactgcagcc tcgag 235

<210> 594
<211> 244
<212> DNA
<213> Homo sapiens

<400> 594
gaattcgcg cgcgctcgac aaatctatca gtgcagtata tatacaacct tgtcagacga 60
gtagctgaca aaggaaatct cctagtacaa cttgtagcag tactattata aagaattcct 120
gacttgacac attttgatga agttgggtga aataatttgt tgggtttgtt caatttttgg 180
tgtcatttat ataaaaagaa taaagaagaa tgtgaatggt aggaagtcag gcgagatgct 240
cgag 244

<210> 595
<211> 229
<212> DNA
<213> Homo sapiens

<400> 595
gaattcgcg cgcgctcgac tgatgggtct cctgtacccc agggcatggc cctgtatgca 60
ccacctctc ccttgccaaa caatagccga cctctcacc cttggcactgt tgtttatggc 120
ccacctctg ctggggcccc catggtgtat gggcctccac cccccaactt ctccatcccc 180
ttcatcccta tgggtgtgct gcattgcaac gtcccagaac accctcgag 229

<210> 596
<211> 218
<212> DNA
<213> Homo sapiens

<400> 596
gaattcgcg cgcgctcgac gagaattgtt tttagcagag tttgtgacca aagtcagagt 60
ggatcatggt gggttggcag cagggaattt gtcttggttg agcctgctct gtgctcccca 120
ctccatttct ctgtccctct gctgggcta tgggaagtgg ggatgcagat ggccaagctc 180
ccacctggg tattcaaaaa cggcacacac aactcgag 218

<210> 597
<211> 153
<212> DNA
<213> Homo sapiens

<400> 597
gaattcgcg cgcgctcgac ttctagacct gcctcgagca aataaaaaac ccagttctaa 60
atcataaaaa tagaagacc agttctagtc atgtggcatt catttatctt ttgggggaatg 120
tccctcttat gcctttgtag aacacaactc gag 153

<210> 598
<211> 194

<212> DNA

<213> Homo sapiens

<400> 598

```

gaattcgcg cgcgctcgac atttttccct gtttttggtg aggtaatgaa gaaggaaaaa 60
aaaaatctca tccaaagatg caaagaaaca atctgctggc ccaggtcatt ttcattggtat 120
ctttttgttt ctcctttctt tgttttgtaa gtacatgcat tttggctgaa aaagatacag 180
gcaccattct cgag                                     194

```

<210> 599

<211> 232

<212> DNA

<213> Homo sapiens

<400> 599

```

gaattcgcg cgcgctcgac cagaaaccca taaagatttc ttttaaggatt tggatccgat 60
atctttctga attaggccct aaattattat gaatgtgaac ctagggtata tgtcttgctt 120
gtggatctgt tgctgctgata ctttgaagca gaatgatttg tggatcattt taccagtcct 180
ttctcttttt tgggtcaaatg cagatggcat ggaggaaatg gaaagactcg ag          232

```

<210> 600

<211> 227

<212> DNA

<213> Homo sapiens

<400> 600

```

gaattcgcg cgcgctcgac cacagggttt gaggaacac agagctaaaa gttggagtgt 60
ttattctatc cacttttttag actttgcaag agtgtgcatc cacaatcaca tatatatgga 120
tggaatcact gaatcttttt catctcctat tcagaataca tctgcttctt gctttcacia 180
tgtgcaatth tgctcttttc tgtgtgagag ctatgggaga actcgag          227

```

<210> 601

<211> 198

<212> DNA

<213> Homo sapiens

<400> 601

```

gaattcgcg cgcgctcgac tgaagaacgc cgaaagaagg aagaacaagt catacaggtt 60
taaattctgt ttcaacttgt tgctagttat cttagatttg tgcccaaagt gtatcagcaa 120
atgttcaagg tttttatact tgtaaggctt gttttcatta ttcacgtgtt aaaagtgaca 180
tcattctccc aactcgag                                     198

```

<210> 602

<211> 233

<212> DNA

<213> Homo sapiens

<400> 602

```

gaattcgcg cgcgctcgac cagaatcaaa tataaggcta aaattattag tgcatacagt 60
gaaattgagc aaccgctgtt gttagaaatt aaaagggtgag ttctgttatt caccaactgt 120
taatttagcc caaaaagtgc cgagaaggag ttgggagtgg actccaatct gttatgaaag 180
tgagacaaac attcttggtc cttctgatcc ctttcagtag cagttctctc gag          233

```

<210> 603

<211> 119

<212> DNA

<213> Homo sapiens

<400> 603

```

gaattcgcg cgcgctcgac gattaattct agacctgcct cgagcgctat cttttcactt 60

```

tggggcacag ttttacacgt gataacaata gtagctgat ttccaaggtt ctccctata 119

<210> 604
<211> 188
<212> DNA
<213> Homo sapiens

<400> 604
gaattcgcg cgcgctcgac ggtccttggg ggaataacct tacaaacgtt taaagacttt 60
taattttaat ttttattttc ttccagctt tattgaagta taattgacaa ctgaaagact 120
agttggtaat tgaaattagg actcattttt atagtcagac aatgttaata tttaggagga 180
gtctcgag 188

<210> 605
<211> 193
<212> DNA
<213> Homo sapiens

<400> 605
gaattcgcg cgcgctcgac ccagtatgtc ttttctattg tattcactat gtctactttc 60
gttccagatt acagagtttag actattccct cttttcttca tgctgtttgc agattaccaa 120
agttccagag aacctgctac cttttgcagt gcagtgcaga aacctcactg tgtccaatac 180
ccgaacactc gag 193

<210> 606
<211> 173
<212> DNA
<213> Homo sapiens

<400> 606
gaattcgcg cgcgctcgac ctggagtgcc tgggtgtgtc ctccggaatg ctggtgccgg 60
aactcgctat ccctgtttgc tacctgctgg gggcactgac catgctgagt gaaacgcagc 120
acaagctgct ggcggaggcg ctggagtcgc agaccctgtt ggggcgcctc gag 173

<210> 607
<211> 310
<212> DNA
<213> Homo sapiens

<400> 607
gaattcgcg cgcgctcgac cttttcacct tctaggagat cgactcacct tctttttcct 60
acctttctat tgcattttta ttttgttgac taaaatttta ctttctaaga gtcactcttg 120
ttttctgatg gtttttcttc ctctctctca atccaacca tccctctctc ttccctggca 180
tcaactgcctt tccccctttc cttttttctc ctctctcct ctctctcct cctctctctt 240
ctctctctc cttctctgtc tctctctctt cctcttttct ccactgcct cctgttcccc 300
agccctcgag 310

<210> 608
<211> 189
<212> DNA
<213> Homo sapiens

<400> 608
gaattcgcg cgcgctcgac agaggcaata cagtaaaaat tacacggtag aaactgagtt 60
accagtgcac accaaaactt gggtagggag aatataccta aagttgtcct tagaaggaaa 120
attgtagttc tgtatatcaa catattaaag atgaaaataa aatttaaaac aatagcacia 180
agcctcgag 189

<210> 609
<211> 188

<212> DNA

<213> Homo sapiens

<400> 609

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gaattcgcg cgcgctcgac gagttaagt gcagaaccgg gattcaaact caagttctcc 60
ctaacatcct ggaagccaag ggaaggagt aatgaaatat gaaagtgaga aacactgttg 120
gctgggcatg gtggctcctg cctataatct cagaactttg ggaggctgag gcaggcagat 180
cactcgag                                     188

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<210> 610

<211> 202

<212> DNA

<213> Homo sapiens

<400> 610

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gaattcgcg cgcgctcgac cttctctgta ttctctttat ctctctcagc tattttctgt 60
ataatctcct cagatctatc ttctagttaa taaattttct tcaaccatga ctaattttat 120
gttatacttg tccaagatgt ttttaatttc agtgacaata tttttcattt tgaaagtctt 180
gttttttggc cagactctcg ag                                     202

```

<210> 611

<211> 166

<212> DNA

<213> Homo sapiens

<400> 611

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gaattcgcg cgcgctcgac gattgatttt tcatatgttg aatcctcctt tcgttttggg 60
tttattctgt taggtcatgt tgtgtaattc ctttttatat gttactggat ttagtttctt 120
agcgtttttt gaggattttt gcattcttaa ttgtaaggga ctcgag                                     166

```

<210> 612

<211> 152

<212> DNA

<213> Homo sapiens

<400> 612

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gaattcgcg cgcgctcgac gaagatacta aaactacttt ttctcccaca ggataattgt 60
agacgtacat tcaaaataga agtaaatata tggtaaatatt agttcttcta tttttaatta 120
atagattaaa cctttggacc acggcactcg ag                                     152

```

<210> 613

<211> 194

<212> DNA

<213> Homo sapiens

<400> 613

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gaattcgcg cgcgctcgac tagtagtggt gcattgtggt ttttaattgc atttcttga 60
tgaccattga agttgagcac attttcatat ttatagatca ctccagtatc ctgttttggg 120
tagtgtctgc taaaatcttt tctccatttc tctattgggt tgtctttttt tctgttttaa 180
gcaacacact cgag                                     194

```

<210> 614

<211> 258

<212> DNA

<213> Homo sapiens

<400> 614

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gaattcgcg cgcgctcgac ctttttagtaa aagtaaatat ttctgtctct ttttctgctt 60
tttattttcc tgcctcagtc tgtgttattt attttctatt ttcttttaac ttgcttttga 120
tttaatttgc tgtttttctaa tttctcaagg tagaagccca gatttttgat ttgagacctt 180

```

tcttttccctt ttttgaatat aagcatttga taatctgtgt tttcctttat gtactgcttt 240
tgctgtgtcc tgctcgag 258

<210> 615
<211> 188
<212> DNA
<213> Homo sapiens

<400> 615
gaattcgagg cgcgctcgac ctttccctgca acaagatgat cgtgagtcag ctgtccctata 60
acgccgggtgc tctgacctgg ctgtccctgcg ggagcctgtg cctgctgggg tgcatagcgg 120
gctgctgctt catcccttc tgctgggatg cctgcagga cgtggaccat tactgtccca 180
tactcgag 188

<210> 616
<211> 149
<212> DNA
<213> Homo sapiens

<400> 616
gaattcgagg cgcgctcgac gtccattcat tgattcattg aatgattcat ttactcaata 60
agcatatatt tgggtccatc ttggcccagg cactatgctg ggcattagag aaatttgaca 120
gtgggttagg gcaaggccct gccctcgag 149

<210> 617
<211> 193
<212> DNA
<213> Homo sapiens

<400> 617
gaattcgagg cgcgctcgac aggatttaac ctatagagtt ctgattcctt cttcccttca 60
atttttatca agtatttaatt tgcccactgg atgatttatt ttagaattgg cctactcttt 120
tttttttttg gcttcagtgc ctgtgggcaa atgtaaattt gcagctgaat tagcaaacca 180
gggacgactc gag 193

<210> 618
<211> 233
<212> DNA
<213> Homo sapiens

<400> 618
gaattcgagg cgcgctcgac atctgtaagt ctctctttac ctcttctctt ctctctttct 60
gcctccctcc ttttctcttt agtttcccca gagtgttgcc gagctaagg tcaatcagag 120
gactcttaga taccttaatt ttttttggtt ttatttttga agaaaggat catcgctccc 180
attaggacat gtatttaca tgtgttttct tttgcttgct caccacactc gag 233

<210> 619
<211> 211
<212> DNA
<213> Homo sapiens

<400> 619
gaattcgagg cgcgctcgac caaagttgtg tttcaaacat catataatgc tctgcctgga 60
aggagttcta ataaatactt tctccctca ctttacatca ccagtgatgt ttttaaagtc 120
ctttatagat tgggtgcctg ggtattgcct agctgaccct tccctaatt tccccgggc 180
gccccaccg ccaccaaca caacactcga g 211

<210> 620
<211> 187
<212> DNA

<213> Homo sapiens

<400> 620

gaattcgcgg ccgcgctcgac ttttggtgct gttagtatcg tcgcaacagc aaagagttaa 60
ataacattta tttctagtg tattgcagta atcattcttc ttttttttaa atttctaagc 120
tgttttatta aatgaaaaga gaacaatgct aagcagcttg tatggtgtgt gtgttgtgtg 180
gtctcgag 187

<210> 621

<211> 170

<212> DNA

<213> Homo sapiens

<400> 621

gaattcgcgg ccgcgctcgac gttgattatc aaattgtttt tgagtgaagt ttggtagttt 60
gtgtctttta aggaattggt ccattttttt ttttaattgt caaatttggg ggcataaagt 120
tatttatgct gttaccttac tatcttttta atatcgtta tgggtctcgag 170

<210> 622

<211> 247

<212> DNA

<213> Homo sapiens

<400> 622

gaattcgcgg ccgcgctcgac gttttaaaaa attctgttta atatctgctt agttggctgg 60
ctgcttttgt gttttcccta ctagattgta agctcctaga ggacaaatta cagagcttat 120
ttattggtgg ttttaattaa atacattttt ttctctacag attagtgcac accagtctgc 180
acagatgcga gttatatctg taaacttgct tggatatttg gtttacatac actatcatac 240
tctcgag 247

<210> 623

<211> 244

<212> DNA

<213> Homo sapiens

<400> 623

gaattcgcgg ccgcgctcgac gattagcaga ataacatcgg atcaaaactg tctagcctgc 60
agttcccttt aattttgtat tataaaaaga aaactaaaca gagaaaactt taaaagacaa 120
tataatgata ccacgtagat tccagtactt gttaacagtt tgccatattt gcttcgtctg 180
tgtgtctttt cggaaccatt tgaaaattgt agatatgaca tttcacccca acaccagct 240
cgag 244

<210> 624

<211> 135

<212> DNA

<213> Homo sapiens

<400> 624

gaattcgcgg ccgcgctcgac cgcattttac caaccatatt cttttttaac tctacaaatg 60
gtgcagataa tccgaacact tatagttcat ttattgttcc caccctccca ctctgcacat 120
gactgttata tcgag 135

<210> 625

<211> 140

<212> DNA

<213> Homo sapiens

<400> 625

gaattcgcgg ccgcgctcgac ataaaaacag cattgtagta cattactaca gctttgtggt 60
atattttgaa gtctggtagt gtgatgctc cagctttgtt ctttttgctt aggatcgctt 120

gtctcttcag ggtcctcgag

140

<210> 626

<211> 249

<212> DNA

<213> Homo sapiens

<400> 626

gaattcgcg cgcgctcgac cctttattca gacctcact gctttgtacc tggactactg 60
 taacacctcc ctgtctgatt gaatctagtt catctgttac actgagggtga gattaaattt 120
 gctaaacaca gtaattttgt accactcttt agccccaat tacgtagttc tcatagctgc 180
 taaaataaga acaaactctt tagcttttcc aggtcttcca taataatgcc caaacatacc 240
 catctcgag 249

<210> 627

<211> 197

<212> DNA

<213> Homo sapiens

<400> 627

gaattcgcg cgcgctcgac ttctaaacat ttgctgttga agtgttttaa tattttagt 60
 tcacaacatt gatcaagttg gaatctttta ttatcttgaa cagtttattc aaaagtatat 120
 tttctgtatt ttcatttgc agcttttctc tgttattttt tgtgagactg aatactctta 180
 aaaaggccga gctcgag 197

<210> 628

<211> 178

<212> DNA

<213> Homo sapiens

<400> 628

gaattcgcg cgcgctcgac gaagaatact gtgtattatc aaaatggtaa cattgtgttt 60
 ccttctgaaa cttgtttctt ttcattcagc attactgttg acatctatcc ttactgatac 120
 ttccaagttt gtttcttttg cttatgggat tctactaatt aatccaccac atctcgag 178

<210> 629

<211> 273

<212> DNA

<213> Homo sapiens

<400> 629

gaattcgcg cgcgctcgac aacactcctt atgacaagct gccacaaggc aagggcatca 60
 gatctcttta gtcaaggcaa gtttctcagc ctgtatactg attatgtttt gggctggata 120
 attatttgtt gttggggctg tcctgtgtat tgcagcgtcc tgggcctttg cccactagat 180
 gccaatagca tccctttccc caatgtggca accagaaatt accaaatggt acctgagagc 240
 aaatcctctt ttacttctcc catccctctc gag 273

<210> 630

<211> 216

<212> DNA

<213> Homo sapiens

<400> 630

gaattcgcg cgcgctcgac gtattatcaa atcattttgt gaaatcacct cattttaaga 60
 tttttaaatc taatgagtgt gagtaaaata cataactaatg ttgctgtgaa tttagtatgt 120
 cttttctttt tctttaagtt tgtgccattg gattattctg ttcctataga aatccccact 180
 ataaaatgta aaccagacaa acttccattt ctcgag 216

<210> 631

<211> 168

<212> DNA

<213> Homo sapiens

<400> 631

```

gaattcgcg cgcgctcgac gttctataaa gataaatccc ttctcctgcc attttatttt 60
attatatttg cataggggtt ttttaattca atgttttata atccattgca gttctttttg 120
atgtctccat tgctcacagat ttggctggta gtagtctccc cactcgag 168

```

<210> 632

<211> 193

<212> DNA

<213> Homo sapiens

<400> 632

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gaattcgcg cgcgctcgac cagtttgatt tttagctcaa attgttgttt aaaataaatt 60
atgaatttga acgtattcag ctatgggttt cctttttatc tgctctaaaa gtgccttagc 120
tacaatagtt tttctctgt tactcttcac tgtaattttt ttttatgaag gaaaatcgct 180
ggagggactc gag 193

```

<210> 633

<211> 211

<212> DNA

<213> Homo sapiens

<400> 633

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gaattcgcg cgcgctcgac gaaatataaa aactatgatg ctgcttcttt cttttttttt 60
cttgagacac agtctcactc ttttgcgag gctgtactgc agtgggtggga tctgcactca 120
ctgcaacctc tgctctccga gttcaagtga ttctctctcc tcagcctccc tagtagctgg 180
aattacaggc atgtgccacc acgacctcga g 211

```

<210> 634

<211> 253

<212> DNA

<213> Homo sapiens

<400> 634

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gaattcgcg cgcgctcgac atcatttctt ctteatgctt agtactgcta ccttagtttt 60
gttcctcatg atttcttgcc tgtgttatta taatagatcc ctaagtggtc tctttgtcta 120
cattctcacc cctccattt tatcccatg tgctttccag aaggaaactt ctaattgtag 180
atctgattgt gcctctcttg gggcacacat cgtatcactg ccaggacagg accaagtacc 240
aagcaacctc gag 253

```

<210> 635

<211> 312

<212> DNA

<213> Homo sapiens

<400> 635

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gaattcgcg cgcgctcgac cctggctctgt cccaacatga aggcaataat ttgttacctc 60
attaatagat ctgtcctttt tcttttcaaa cagttcctta tgttacctat gaaatctagc 120
tggggctgtg tgggtttctga ttccccctgg ctattctctt acttttctta cttttccagg 180
ctcagcaggg agctgtctga tgagaaagag cctgaagtct tgcaggactc actggataga 240
ttttattcaa ctctctttga gtacctggaa ctgcctgact tatgccagcc ctacagaagt 300
gacgaactcg ag 312

```

<210> 636

<211> 168

<212> DNA

<213> Homo sapiens

<400> 636

gaattcgcgg ccgcgtcgac agccagagca atagtaatgt ttatagacca tctttctcat 60
 aaatgccact gctcactatt gtacatatgt ctttttcaag tttttttgga agacctccct 120
 cctctgtcac catatttccc taatgtctgt gaaactaagt acctcgag 168

<210> 637

<211> 262

<212> DNA

<213> Homo sapiens

<400> 637

gaattcgcgg ccgcgtcgac gcattgaatc caggtttttt gtttcacttt gttttttcaa 60
 agaatacttc ttaagtgggtg gtattttttt gttgtattac atcatgtggc aaatgatctc 120
 tgtctgtgat gttatgattg atcaggtttc aggtgttata agtttgatta ttcccttgta 180
 ccttgtcagc ttttaccag tgatttcagt ggcgttaat ggtcatggcc tagattcact 240
 atttcaggaa ggcacgctcg ag 262

<210> 638

<211> 254

<212> DNA

<213> Homo sapiens

<400> 638

gaattcgcgg ccgcgtcgac cttttcacga ttcattgctg aaggctttat tctatgaaga 60
 cctttgttgc tgaagggtatg aaggatgtgg tagtaatgga aagtatttta ctgatctttt 120
 atttcctttt aaattttttg agacagagtc tcgctctgtc atccacgttg gagtgtggta 180
 gcgtgatctc agctcactgc aacctctgcc tctgggttt aagcacttct cctgcctcag 240
 cctcccaact cgag 254

<210> 639

<211> 169

<212> DNA

<213> Homo sapiens

<400> 639

gaattcgcgg ccgcgtcgac ttttttaca attactcata accagaagag ttctgttggg 60
 ttttaccata tggccagatt catcttgctt ttcaaactta tgtaagtaat ttttccaaat 120
 ctcttttttt cccataacat acatgtctgt gagtccactc ctctcgag 169

<210> 640

<211> 159

<212> DNA

<213> Homo sapiens

<400> 640

gaattcgcgg ccgcgtcgac cctaaaccgt caattgaatt cttagcaagga atttgtgggc 60
 aaacctacta ttttagacac tattaataag actgaattgg cctgtaataa cacagttatt 120
 ggttcccaaa tgcagttaca gctgggaaga gtctcgag 159

<210> 641

<211> 230

<212> DNA

<213> Homo sapiens

<400> 641

gaattcgcgg ccgcgtcgac cctaaaccgt cgattgaatt ctaggcgtga gccaccacac 60
 ccagcctgct atagcttttt ctttgcgtgag atttgttttt ccatttgctt tactagatta 120
 cttgaagcgc ttttataatg actgctgtag cttccttgtt gaagaattcc agcgtctgtg 180
 tcattcttgggt gttggcatct acctattatc ttttctcctt caaactcgag 230

<210> 642
 <211> 253
 <212> DNA
 <213> Homo sapiens

<400> 642
 gaattcgcg cgcgctcgac gcttttaaga actttcaa atttctcca gctgtatatt 60
 ggttgccttc aggggaagagt ttgttctgaa ttgcctcgt ctgttttcca gaagtgaata 120
 tttgaaccga ctgacctttt agtttttagt actgtatttt taaatatttt atttgcttc 180
 ttttagaagc tacatgctca atttttgtag ttctctatac ctcataaata tttttgagct 240
 cagccagctc gag 253

<210> 643
 <211> 245
 <212> DNA
 <213> Homo sapiens

<400> 643
 gaattcgcg cgcgctcgac ccccgacac ctccaagtca cccaggtcca cctgcattgc 60
 agcagactgc cccagccaca cccacgctct ctccctcttc tgtacgcatg acgctccttt 120
 ctgcctctga gcatttgcct gtgctgttcc ctctacttgg aatactcttc cctctttttt 180
 tttttatttt tgagacagag tctcactctg ttgccaggc gattctcttc tctcagcttc 240
 tcgag 245

<210> 644
 <211> 197
 <212> DNA
 <213> Homo sapiens

<400> 644
 gaattcgcg cgcgctcgac cggatttcaa ggaattttta gactttgtgg atttttcttt 60
 cactataatt gtatgtttgg ctccctaatt atttaaatta catacataga tatttttgtt 120
 acttttgagaa tagtctatct gaaatttgaa gttcttttaga gcttaataata ttaaataatgc 180
 taacactcat cctcgag 197

<210> 645
 <211> 258
 <212> DNA
 <213> Homo sapiens

<400> 645
 gaattcgcg cgcgctcgac gggaattact atctacctct tagtgttata tttggaatga 60
 atgaaataac acatggagag aatttagtac aatacctggc acatcatata catgtttaaa 120
 gtatttctta tgcttgtatt gaagttatta atgatgaact tggagattgg caggggaata 180
 agaaagaggg ttggcagaga tgttgagaag gttgaattga caggcagtgg ctgtctggat 240
 gttagggcaa ggctcgag 258

<210> 646
 <211> 174
 <212> DNA
 <213> Homo sapiens

<400> 646
 gaattcgcg cgcgctcgac gcaattcttc gctgaagtca tcatgagctt tttccaactc 60
 ctgatgaaaa ggaaggaaact cattcccttg gtggtgttca tgactgtggc ggcggttgga 120
 gcctcatctt tcgctgtgta ttctctttgg aaaaccgatg tgatccttct cgag 174

<210> 647
 <211> 201
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (92)

<400> 647

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gaattcgcg cgcgctcgac gtaaaaagat tctaacagga aggaggaggg tgtaataaaa 60
tagaaatggc atctctagaa ataatgttca tntttaagat tgattatagg gaggaaaatg 120
aaacacaatg agcctttcaa aaaataagtc atgagacttt gggcaaaaaa caaacaataa 180
aatatgaggt caactctcga g 201
```

<210> 648

<211> 198

<212> DNA

<213> Homo sapiens

<400> 648

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gaattcgcg cgcgctcgat ttttgccatg aatgggaaaa gctttttttc tctttttttc 60
tttttcgtgt ttttttcttt tgtttcaaat tcttctcttg gtcatttgc cttaatgctt 120
tgtctcccta aaagaggtac ctatgtaaaa acggaagtat ctggccctac gcagtggaaa 180
aagggaactaa cactcgag 198
```

<210> 649

<211> 216

<212> DNA

<213> Homo sapiens

<400> 649

```
gaattcgcg cgcgctcgac gcaatttgaa tataatatgt ctagggtgtag cttttctctt 60
tttttttagca tttattctgc ttggtatttt cttagcttct cgaatttggt gttgggtatc 120
gacattgatt tagaggaaat tcacagtcac tattgcttta aatatttctt tctgttccct 180
cttctctctg ttttctgttt acatgtacac ctcgag 216
```

<210> 650

<211> 157

<212> DNA

<213> Homo sapiens

<400> 650

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gaattcgcg cgcgctcgac cctaatacaga aggcattgtt ttagtatttc ttgggagtgt 60
cagctgtata atgcagcagc tgttcaatcc cttacccttc tctgcaagga cttccttaca 120
gcttggtgca gttctttccc agaggccacc actcgag 157
```

<210> 651

<211> 158

<212> DNA

<213> Homo sapiens

<400> 651

```
gaattcgcg cgcgctcgac aatcatttca gatttccagc aaagttgcaa aaatatcata 60
aagaaatatt tacccttcac tcagattccc aaatgttagc acttcgccac atctgcctca 120
ttctcttttc tctctcttca cacacacaca cactcgag 158
```

<210> 652

<211> 227

<212> DNA

<213> Homo sapiens

<400> 652

```

gaattcgcg cgcgctcgac agcccatgaa agattccaga acagagtttt gtaggtaaag 60
ttaagtgtat tacctggaaa gtctgttcca tgttgataaa cccaagtcct gaagaaggaa 120
agttgctgtt tcaaggtatt ttccttctct gtctcttctt ttctctctgt gatgcacaca 180
aacacacaca tatacacata caatctctga attcactcaa actcgag 227

```

<210> 653
 <211> 265
 <212> DNA
 <213> Homo sapiens

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<400> 653
gaattcgcg cgcgctcgac ctttcccatc cctagattcc tttgtgctgc ttgtctacat 60
tgatgataa acatcacatt aaatgcaatc tctccctccc caccctctct ttttttttga 120
gataggatct cgcttgctgt gttgccaggg ctgcagcgca gtgggtgtgga tcgtggctca 180
ctgcagcctc accgtctggg ctcaagtgat cctcccccag agcctccact tcccagttacc 240
cgggactata gacacgtacc tcgag 265

```

<210> 654
 <211> 240
 <212> DNA
 <213> Homo sapiens

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<400> 654
gaattcgcg cgcgctcgac gtgaggttga gggtcctttc atatattcac gggtctgttta 60
tgtttatttc ctgtgagcta gctcttgata tctagtcccc tgattcttcc ccaagaaaaa 120
ttccataaat attttcacag gattgtgtta aattccetaga ttaatttggg aagaactgat 180
tttatgttgc atctttttat ccaagaacct gttatgtttc tccatttgtt caacctcgag 240

```

<210> 655
 <211> 190
 <212> DNA
 <213> Homo sapiens

```

<400> 655
gaattcgcg cgcgctcgac gtgagacctt gtctcaaaaa cagaacaaaa agcaaaacaa 60
ctgtattagg ggccagatgt ggtggctcat gcttgtaate tcagtgtctt gggaggctga 120
gatgggagga ttgcttgaag ccaggagtgc aagaccagcc tggggaacaa ccaaaccctg 180
tctccctata 190

```

<210> 656
 <211> 164
 <212> DNA
 <213> Homo sapiens

```

<400> 656
gaattcgcg cgcgctcgac tgatttttta aatatatgtc ctttattaaa aatatatgaa 60
gtgcaatgaa agacaaaacc tgtgcattcc tcattgtagc acctattttt aaggcttccc 120
tatctgagtc agctcagttc ttgatgtggg cggaaagtct cgag 164

```

<210> 657
 <211> 172
 <212> DNA
 <213> Homo sapiens

```

<400> 657
gaattcgcg cgcgctcgac caacagggaa acaggagtgt catcaaaagt aaattccagc 60
cgagacattc tctctatat gagaagcaaa agtgaaagga aaaattttgg aaaagtaaaa 120
cactgaagag tcatagtatt ctctgtaac ttggaactgg agtggtctcg ag 172

```

<210> 658

<211> 165

<212> DNA

<213> Homo sapiens

<400> 658

```
gaattcgcgg ccgcgtcgac aaataaagta gggatgccat ctgctatatt caaatgtcct 60
tgcagattgt tttttctaata cttatggtea tattctgata ttcttaaatt agatagtgat 120
tgctatgtta acacagagca gatagtattt gcacaatgcc tcgag 165
```

<210> 659

<211> 272

<212> DNA

<213> Homo sapiens

<400> 659

```
gaattcgcgg ccgcgtcgac cacacacaca tacacacata tatatatata actttataaa 60
gtatcatgta atatttttta taatttatct ttaattccaa taactagggt acatagattc 120
taaagttctg aatccctatag gcaagtgggt caattatttt atccatgtcg tctagatacc 180
tccttatttc taaatattat ttcttaattt ttccaatatt agatgttggt attgattgtc 240
tcacagatgc catccctaag gacgtactcg ag 272
```

<210> 660

<211> 253

<212> DNA

<213> Homo sapiens

<400> 660

```
gaattcgcgg ccgcgtcgac taggtttagt tgtcttaaca aaaaccagtc gaggaaaagt 60
ttttagttaa gcagaatact aaataaaaaat attaattcag gctcagatat cttttgtttt 120
gatccctttg aaagtcagaa ctgggtttgt ttaggagtat tttatgtatt tgatttttat 180
tcttaactat tcccttatga tggtagctgt tctttcagca aacagttatt ttgtgacctat 240
tgcggtgcttc gag 253
```

<210> 661

<211> 283

<212> DNA

<213> Homo sapiens

<400> 661

```
gaattcgcgg ccgcgtcgac cgattgattt cgctagtact ttccaaaaat actaaacaat 60
aagatagtag tggagctttg tcctattcct tacttcaatc agatattttt aatgcttttc 120
tattaagatt agatctggct ttagattgaa gcgtacatat tttatcatgt taaagtattc 180
agctgttact gtttttttaa agtttttgtt ttgttttttt ttgttttttt 240
gaggcagagt ctcactctgt tgcttaggct ggagcgactc gag 283
```

<210> 662

<211> 120

<212> DNA

<213> Homo sapiens

<400> 662

```
gaattcgcgg ccgcgtcgac ttgaattcta gacctgcctc tcacctggac cactggagga 60
accttctgat tggtecccat gctttcactc ttgtccacc tatttctcca cgcactcgag 120
```

<210> 663

<211> 244

<212> DNA

<213> Homo sapiens

<400> 663

```

gaattcgcgg ccgcgtcgac aactgcaatt acttctgtac caaccttaata gtttgcttag 60
tggtttttatc atgaaaaggt attagatttt taaaatgttt tttctgtctg ttgaggttat 120
cgtgttattt tgctttgttg tactattggt gtgtataatt ttttttgaga cggggtcttg 180
ctctgtcgcc caggctggag tgcagtggcg cgatctctgc tcaactgcaag ctccacatct 240
cgag 244

```

<210> 664

<211> 193

<212> DNA

<213> Homo sapiens

<400> 664

```

gaattcgcgg ccgcgtcgac taaactcctg agctcaagtg atcctttctac ctccgggtcc 60
caaagtactg gtattacaga cgtgagccat ggcccccagc ctgtctctgt gttttaacct 120
tcatttagta ttagttctac aaatgattac ttatttaatg ctcaatacta gtctctgtgt 180
cagtatcctc gag 193

```

<210> 665

<211> 329

<212> DNA

<213> Homo sapiens

<400> 665

```

gaattcgcgg ccgcgtcgac cctcctcttc tgtcaccagt gccctcgccc cctccgatgt 60
catcacctca cccgggttcc ttaccgtctt catttgcacc tgaaacctac tttggagaat 120
atacagattc cagcgataat gactcagtc agcttagaaa ttctgctgag tctgtttcag 180
aagatgatac aactgaatca cagaattatt ttggctcatt gagaaaaaat aaaggaagtg 240
gcacatggga ggaaaagccc aaatcacatg aagctatcca agctctgaat acatggggaag 300
taaataaagt gacaacttct ggactcgag 329

```

<210> 666

<211> 189

<212> DNA

<213> Homo sapiens

<400> 666

```

gaattcgcgg ccgcgtcgac tgcattggatg tgtatgtgtt tgtccccagc caaaatgacc 60
tttctcgtgt ccattattct gttatgtgtc cattactgtc ccacctccat gcctttcccc 120
aggggtgttc ttaaccctgg aatgctcatt tccccctctt tatctctgag tgtaaacccc 180
aaactcgag 189

```

<210> 667

<211> 218

<212> DNA

<213> Homo sapiens

<400> 667

```

gaattcgcgg ccgcgtcgac tatacattca gaaaagtaca tagttcagtg ctttttctac 60
taagtgaatg catctgtctt taaaaagtga ccacccccat aacagaaaat agaattgttac 120
cagcattcca aagacccctt ctctgttacc tctccctcct tctccaagcc acactccttt 180
ctgactttctg tcaatataga tcaattggcc aactcgag 218

```

<210> 668

<211> 129

<212> DNA

<213> Homo sapiens

<400> 668

```

gaattcgcgg ccgcgtcgac cctcatctgg cgcattttta ttgcaagatc acaaatggca 60
agaaatatct ggtactttgt ggttagcttg tgttacaagt ttttgcata cttccgagca 120

```

acactcgag

129

<210> 669

<211> 251

<212> DNA

<213> Homo sapiens

<400> 669

```

gaattcgagg ccgcgtcgac cagtctgggtg gtgggtgagg agtctgaggc cgttcccgag 60
gcctctctct cctcccggtt ccttcacccc ccaccccgca cccctttccc catcccggt 120
ccgtcacccc cccgtccccc acactcagga caagaatgcc ctgcccgga caacccagca 180
gcgcctagat ggctttgggtc acgggtccagc ggtcacctac ccccgagacc acctccagcc 240
cgcaactcga g 251

```

<210> 670

<211> 175

<212> DNA

<213> Homo sapiens

<400> 670

```

gaattcgagg ccgcgtcgac ccctatgcca aaatctccct atcattaaaa tacaacaccc 60
caaccctagc aaaaccattc ctgataccac gtgttgctat tatccactat ctctcctcca 120
gtcctatcaa aacttggtgt tgctgtttct gatgctatta ttgtctctgc tcgag 175

```

<210> 671

<211> 211

<212> DNA

<213> Homo sapiens

<400> 671

```

gaattcgagg ccgcgtcgac cttgcctggc aggagtgggt tctaagaaga gctgttgatt 60
gttgaacttt gacgctaagg tgagggtttg gatttttttg ggatagcttt attttggtat 120
aatttttaga aagtttgaga atagtacacg agttcctatt tacccttcac ctagagtcac 180
gatgatttgc gttttgcccc atttactcga g 211

```

<210> 672

<211> 296

<212> DNA

<213> Homo sapiens

<400> 672

```

gaattcgagg ccgcgtcgac caccagacca gttctgtgac tccatctggt ttctgacttg 60
tgcatcggtt tggcagcccc atcagctgct acctctcttt tgtctctttg cccgtgtggt 120
tatgtatttc aaagtacctc tattttaatg gagttttggg acctatcaaa tataaatata 180
ccatttcctc aagaccattt ttcttttcta accagtaaat ttatatggca tttatttttt 240
cttacagaag ctctcttttt ttctcttttt tcttttcttt tttggagggt ctcgag 296

```

<210> 673

<211> 176

<212> DNA

<213> Homo sapiens

<400> 673

```

gaattcgagg ccgcgtcgac gagatgaatc caggctataa catttaacaa gaccttatta 60
aaagcttcaa gatgttagcc ttctctggtt ccatatctag cttacttggg tgtttttggg 120
ggatcacatg tctgtcctcc aaactggaaa cgtctaactc tccaggagta ctcgag 176

```

<210> 674

<211> 137

<212> DNA

<213> Homo sapiens

<400> 674

gaattcgcgg ccgcgtcgac cccatctatg aagaactgaa agaccgcagc cgtagaagaa 60
tgatgaatgt gtccaagatt tcattttttg ctatgtttct catgtatctg cttgccgccc 120
ccatcctctg cctcgag 137

<210> 675

<211> 202

<212> DNA

<213> Homo sapiens

<400> 675

gaattcgcgg ccgcgtcgac agcattttta gctttgtaca ttcaaagtea tgcatatctc 60
tgagagggtcc tttaatgtga agattttttg cttgcatcac ttctcttgga acatcttcat 120
ctttctgttg ctaatttcta cttttagtta tttatttttt aaattaaatg tcatatgggc 180
ttattattgg gatagcctcg ag 202

<210> 676

<211> 227

<212> DNA

<213> Homo sapiens

<400> 676

gaattcgcgg ccgcgtcgac aaaagaagtt aactagagtg ccataaagt cactggactt 60
gaataaaaaat gaatatcttt ctctggacaa aagcagcact tcagattctg ttgatgaaga 120
aaatgttctt gagaagatc ttcatggaag actttttatc aaccgtatct ttcatatcag 180
tgctgacaga atgtttgaat tgctctttac cagtccacgc tctcgag 227

<210> 677

<211> 556

<212> DNA

<213> Homo sapiens

<400> 677

gaattcgcgg ccgcgtcgac agttggaaag cttgcagcat ctggatcaat tacaatgcaa 60
gaacatttga gctatgtcaa gctacctctt catagtgaat tatgagttgc ctttgggtgat 120
ccaggcatta acgaacattg aagataaaac tggattgtgg tatctgaacg ggaactatctt 180
ggttctgttg gtgtcatttg tggteattct tcctttgtcg ctgttttagaa atttaggata 240
tttgggatat accagtggcc ttctcttgtt gtgtatggtg ttctttctga ttgtgggtcat 300
ttgcaagaaa tttcagggtc cgtgtcctgt ggaagctgct ttgataatta acgaaacaat 360
aaacaccacc ttaacacagc caacagctct tgtacctgct ttgtcacata acgtgactga 420
aaatgactct tgcagacctc actattttat ttccaactca cagactgtct atgctgtgcc 480
aattctgac ttttcatttg tctgtcatcc tgctgttctt cccatctatg aagaactgaa 540
aaaccgcagc ctcgag 556

<210> 678

<211> 196

<212> DNA

<213> Homo sapiens

<400> 678

gaattcgcgg ccgcgtcgac atttgtttta ttcagatata gtttacatgc agtaaaattt 60
attctttttt aggtttgcag tttgatgagt ctgacaatgt atagtcatat aaccaacact 120
acagttgaga tatagaatat taccacagaa agttccctgt accctttagt gattctcttc 180
tccccacgt ctcgag 196

<210> 679

<211> 226

<212> DNA

<213> Homo sapiens

<400> 679

gaattcgcg cgcgctcgac tgcttttagta ataaattgcc taccagtttt gtaaagcttg 60
gtatatctta tttttctttt gacttttgc aaacacagaa gtaataaag tccctcgat 120
ccaactagca gtcctcagt tatcaattcg tggcccatct catttcacct gctcttattt 180
tttagctttt cattttgtaa tgcttgatc caacacagt ctcgag 226

<210> 680

<211> 113

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (104)

<400> 680

gaattcgcg cgcgctcgac actaagggtg gagtcactgt gcccgccctg atgatttttt 60
tatcatatct gtgtttctgc agagtttttag tggctaaaga aagnacactc gag 113

<210> 681

<211> 196

<212> DNA

<213> Homo sapiens

<400> 681

gaattcgcg cgcgctcgac taagaatggt atgttatcaa aataccttta atagtcacct 60
tatagcactc tgctatttgc catccagttt tatgcatcaa acacaatata ccttttgggt 120
attcctaact gtcgaatggc aaacacacgt tccagaatat agtcattgga tttaacaat 180
aatgacctgc ctcgag 196

<210> 682

<211> 226

<212> DNA

<213> Homo sapiens

<400> 682

gaattcgcg cgcgctcgac tgagaatggt ggtagtggc agaagagtca aaaaatggca 60
gttaattatt cagttatttg ctacttggtt tttagcgagc ctcattgttt ttgggaacc 120
aatcgataat cacattgtga gccatatgaa gtcataattc tacagatacc tcataaatag 180
ctatgacttt gtgaatgata cccgtgtctc taagcacaca ctcgag 226

<210> 683

<211> 196

<212> DNA

<213> Homo sapiens

<400> 683

gaattcgcg cgcgctcgac taaaatacag ttgaagattt ggctgcattt ttgccttacg 60
attacatacc ttaataatta caactcaatt gaggggtcca tatataattc ttctcatttt 120
ctggcagtaa atcatattca tcataatact cccaattttg cacacacaaa aatgaaaat 180
agccccctat ctcgag 196

<210> 684

<211> 193

<212> DNA

<213> Homo sapiens

<400> 684

gaattcgcg cgcgctcgac aactttatcc caaaagtagt gcatgtggag aaagaatcta 60
 gactttcttg tatacatttt tctcttctcc agtaataaac aattaccttt catttatact 120
 ttgataacct gtatttaatt taaaaaaaaa cataaaaatg aggaaccaag tgaaactacg 180
 gatattcttc gag 193

<210> 685
 <211> 258
 <212> DNA
 <213> Homo sapiens

<400> 685
 gaattcgcg cgcgctcgac acttctgact ctgtcagtat tccctatccc tgctcctgat 60
 ttcttctttt tcatagccgt cgccttaaca cacattctac atttgactta tttttctttt 120
 taatcatcta cgtccctcca ctaggctgta aactacagga tgacaaagggt tttgtctggt 180
 tttttcattg ctggctgttc aatatctaat ctagtgcctg gcatgtcatg gacaattaat 240
 aaatgtgaac acctcgag 258

<210> 686
 <211> 197
 <212> DNA
 <213> Homo sapiens

<400> 686
 gaattcgcg cgcgctcgac gtattaatag tattcctaatt gtgtgctgca gaaatggcta 60
 tgagcctctt aaatttcat tgcgaactta aaggtagttt tagaaggaag tacaattgg 120
 ctttcatctt gcaaacaatc gtttttctt tcatattctt aatttgctt gtcactcata 180
 aaaaggaac actcgag 197

<210> 687
 <211> 304
 <212> DNA
 <213> Homo sapiens

<400> 687
 gaattcgcg cgcgctcgac agaagtaaa atcctgaata acttctcaag gttatagtca 60
 cacagctagt aagaagcaaa gtggcattgt taatacctcc caccattaaa aaaaaaaaaa 120
 gtgggttatag caaagtatac actagaataa tttgagttgt ttgagatgga tacaggatc 180
 tcttttttta aattagtagg tacaacaaa gaacttgaaa accacatcct tttagattct 240
 ttgtgtgttc taggagtgt tttcaagggt gttagtaatt tgtgtttccc tgggccatct 300
 cgag 304

<210> 688
 <211> 156
 <212> DNA
 <213> Homo sapiens

<400> 688
 gaattcgcg cgcgctcgac gttaaaccct ggctaatttt attgtctttt ttagagatg 60
 ggatttcacc atcttgccct ggctgttctt gaactcctgg gctcaagctg tctcccgc 120
 tcaagcctcc cgaagtgtg ggattgcaga ctcgag 156

<210> 689
 <211> 329
 <212> DNA
 <213> Homo sapiens

<400> 689
 gaattcgcg cgcgctcgac atgggacaga gtccaagcat gatgggtggc atgcccatgc 60
 ccaatgggtt tatgggaaat gcacaaactg gtgtgatgcc acttctcag aacgttggtg 120
 gcccccaagg aggaatggtg ggacaaatgg gtgcacccca gagtaagttt ggctgcccgc 180

aagctcagca gccccagtg agcctctcac agatgaatca gcagatggct ggcagtagta 240
 tcagtagtgc aaccctact gcaggttttg gccagccctc cagcacaaca gcaggatggg 300
 ctggaagctc atcaggatcat tctctcgag 329

<210> 690
 <211> 191
 <212> DNA
 <213> Homo sapiens

<400> 690
 gaattcgcg cgcgctcgac gttaaaacttt acatttttaa ttaatttatg ttgtatgta 60
 tttatttgtt gagaaagggt ctctctctgt caccctact agaatgcagt ggcgccatca 120
 tggcttactg cttcctgggc tcaagctgtt ctcccatctc agcctcccca tgcaccaccc 180
 tcatgctcga g 191

<210> 691
 <211> 173
 <212> DNA
 <213> Homo sapiens

<400> 691
 gaattcgcg cgcgctcgac atactgtata atttgggtga ggtctacaaa attgggtgtg 60
 actttccttt gcaaatggat ttctcctggg gaattttctt ggctgttctg gaaatgcttt 120
 cccacagctg ggtaactggt ctaaagtggc ttgataatgc tcacaccctc gag 173

<210> 692
 <211> 349
 <212> DNA
 <213> Homo sapiens

<400> 692
 gaattcgcg cgcgctcgac gtgatttata atgacatcct gagaaaagtc agtgaaactc 60
 atttctaacc aataccagat ttcttaaaat agtcaagtat ttttcttttg tgtatgatga 120
 gatattaact tgggtgttatt tcattttttt tttttaagga gtcattctac cctgttctat 180
 ctttacttat gtgaaaatgt ttaaactatg agtttttttc atgtgccttc ttttgagta 240
 atgtcaactt ttaaatacac atgttttaaat aacttagagt gtaataaatt gtgtttaata 300
 tatactgtag ataagtatgg ttaaatgctt tgtaacaca tgtctcgag 349

<210> 693
 <211> 272
 <212> DNA
 <213> Homo sapiens

<400> 693
 gaattcgcg cgcgctcgac cctgcctcta agataaaagc tcaacttctt aacagtgtac 60
 agtgtgcaac ttccaacctt ttatctgtt ctctccacct tcagtttagc gtcattccaa 120
 aaccacaccc ttgcaaaagt ttgtactccg caccacagat gatctccagg cagctcagat 180
 ctctttcttg cctttgccct gcactgttcc ccggtacttc ctcccttatt gtagcactca 240
 gctccccagc caatctgtcc atcgtcctcg ag 272

<210> 694
 <211> 212
 <212> DNA
 <213> Homo sapiens

<400> 694
 gaattcgcg cgcgctcgac cagagaacag gcaaaaaatt actgaagact ttaacagcat 60
 ctgaaatgct acctttattg gatcattgga atactcaaac taaaaaagta tcaactcagag 120
 aaataatgtc agaagaaatt gccttacagg aaaaacataa tttgaaaagg gagaccctta 180
 tgtttgaaaa agattgtgcc actcaactcg ag 212

<210> 695
<211> 226
<212> DNA
<213> Homo sapiens

<400> 695
gaattcgcg cgcgctcgac catattttgt ttgtccattc atcaggtaat ggatatttgg 60
attgttgcgg gtactgttat tgctactcct attttatttt agaaatacga aaagtgaatc 120
tcagggaagt aagttcacca aggtcagaca aatagcaaag ctgagacgca cacaaactta 180
agtgtgtctg atgctatatt tctttctctt aaccactgcc ctcgag 226

<210> 696
<211> 194
<212> DNA
<213> Homo sapiens

<400> 696
gaattcgcg cgcgctcgac tgaagagatt atattcctct acatcaggtc ccaaagatgc 60
agttctgtgg gcaactggga agttggaaac tgaatatggt gaaaatgac ccgtcactat 120
tcctaggagc gtggctgtct cctcagcact cagagtggtg tgggtgtagta gggggcgagg 180
gtatggaaact cgag 194

<210> 697
<211> 196
<212> DNA
<213> Homo sapiens

<400> 697
gaattcgcg cgcgctcgac tctctaccaa gccctttgtc ttgtgaattc tcttctctctg 60
ctgattctgc atggctttct atcctattca gtatcaagtt ctgatttttt gtttattttg 120
ttttcatttc atttctaagt attgctcaat gatcccgctc tctgtgatat ggtttggtcg 180
tgtccctact ctcgag 196

<210> 698
<211> 212
<212> DNA
<213> Homo sapiens

<400> 698
gaattcgcg cgcgctcgac cttaattcct actacaaagc taaataatat ataaaaataaa 60
tagaaaaaat cagtgtctca agttatcctt taatgtgggg aataaaatgt ctgaaagtca 120
tttatgaact aatttttagaa tgctctacta ctggaaatat ttattctttc aacactacat 180
ttgttggttt agatgcttgc caacaactcg ag 212

<210> 699
<211> 300
<212> DNA
<213> Homo sapiens

<400> 699
gaattcgcg cgcgctcgac ctaagtactt tttctttttg aagccattgt aagtgttaatt 60
attttcgttt cattttcaga ctgttcattt ctagtgtatg caactaattt ttgtgtattg 120
atgttatctc ccacaacttt gaacttgctt attagctcta acagtatttt tgtagattct 180
tcagggtttt cttctacaca taggattatg ttacctgttt ttgttttttt tgtttttgg 240
tttgttgctt tgttttttga gacagggtct cactctgtca cccaggaccg gaagctcgag 300

<210> 700
<211> 124
<212> DNA
<213> Homo sapiens

<400> 700

gaattcgcg cgcgctcgac attgaattct agactgcttc atggatacaa tatctgtgca 60
 tctctttgac agtattatgc tttttctttt cttctctttt ttgaggtgga gtctcactct 120
 cgag 124

<210> 701

<211> 214

<212> DNA

<213> Homo sapiens

<400> 701

gaattcgcg cgcgctcgac aggggaataag agtttttaggc atctataaaa ctgtctgaga 60
 ttttaaccttt tctcatataa gcaagggatt tgattacaca aaattttttg acagtggata 120
 gctagactgt acttatcaat ttgttcaacta ctgttctatg gctatctctg gaagacctt 180
 taggtacaat aaggaagatg ggagagtact cgag 214

<210> 702

<211> 286

<212> DNA

<213> Homo sapiens

<400> 702

gaattcgcg cgcgctcgac ggtagcctct cacaactccg cccttgccct ctgccttcca 60
 cttccttcca tctcatttct aaaccccaaa cagctcatct ctaaaaagat agaactcca 120
 gcaggtggct tctgtgttct tctgacaaat gattcctgct tctccagact ttagcagcct 180
 cctgttccca ttcttgggtca cagctctagc cacagcagaa ggaaaggggc ttccagaaga 240
 atatagcacc gcattgggaa acagcagcct ctaccctcc ctcgag 286

<210> 703

<211> 158

<212> DNA

<213> Homo sapiens

<400> 703

gaattcgcg cgcgctcgac gttataaagg gacacagctg aaagccttac tgatacttga 60
 aggagccag aaagtgttt tcaaacctaa gcggtatagc cgagaccatg tgggtggaagg 120
 ggaaccgtat gctggttatg atagtcacaa tgctcgag 158

<210> 704

<211> 439

<212> DNA

<213> Homo sapiens

<400> 704

gaattcgcg cgcgctcgac acacaattct tttcttccgc ttggatatcc gcatgggcct 60
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 ccctgagtat atcaagtact tcaatgataa aaccattgat gaggaactag aacgggacaa 180
 gagggtcact tggattgtgg agttctttgc caattgggtc aatgactgcc aatcatttgc 240
 ccctatctat gctgacctct cccttaaata caactgtaca gggctaaatt ttgggaagggt 300
 ggatgttggg cgctatactg atgttagtac gcggtacaaa gtgagcacat caccctcac 360
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<210> 705

<211> 192

<212> DNA

<213> Homo sapiens

<400> 705

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agcctgtgtt gggaaatcct gccctgtgct gcctcttgtt gcagagatcc tatctggata 120
 aagtgtctggg taaccaggaa tcagaacctc tggaggacga gtatgacttc tttctgtcc 180
 ctgctgctcg ag 192

<210> 706
 <211> 205
 <212> DNA
 <213> Homo sapiens

<400> 706
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 cagaagagac ctggaaaagg tgctgacagg agaggagaag gctcttagac ctggagatcc 180
 tggattctgt gcccgtagac tcgag 205

<210> 707
 <211> 279
 <212> DNA
 <213> Homo sapiens

<400> 707
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 tcagcgaagt tggccctttc cattccagct gaaaaatttg aaaacatgaa gagctcatta 180
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 tcacttagtg aaattagaca gttaaaaaga gaactcgag 279

<210> 708
 <211> 228
 <212> DNA
 <213> Homo sapiens

<400> 708
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 tcaacaggac tgtccgtgct atctccacca gcagggcccc gcggagctcc ccccgctgcc 180
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<210> 709
 <211> 189
 <212> DNA
 <213> Homo sapiens

<400> 709
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 aatcaaagaa gcgctataga aatgaaggga gtcccagccc tagacagtcc ccgaagcgcc 180
 caactcgag 189

<210> 710
 <211> 293
 <212> DNA
 <213> Homo sapiens

<400> 710
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 agatgaatat tttcctcaga tctctgctag tcctgggtgtt ttctcttaaa actagctgta 180
 tcttgtcgga ggtccctgaa agtgaattaa ctttggatct cttaggtatc tgtgtttgga 240
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<210> 711
 <211> 143
 <212> DNA
 <213> Homo sapiens

<400> 711
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<210> 712
 <211> 195
 <212> DNA
 <213> Homo sapiens

<400> 712
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 cagatcaact taaggagatt gcaaaattac gccagcagtt gcagagaagt aaacacagca 120
 gtcggcatca tcgagataaa gaaagacagt ctccatttca tggcaaccat gcagctatta 180
 accagtgtcc tcgag 195

<210> 713
 <211> 170
 <212> DNA
 <213> Homo sapiens

<400> 713
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 tagaatcact ttcagactta agaataatgt tgatttccca aatgctcgag 170

<210> 714
 <211> 170
 <212> DNA
 <213> Homo sapiens

<400> 714
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<210> 715
 <211> 200
 <212> DNA
 <213> Homo sapiens

<400> 715
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 tattattccc attactcgag 200

<210> 716
 <211> 232
 <212> DNA
 <213> Homo sapiens

<400> 716
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 ggaatctgggc ttctggagag tattgctgtt gatctctgac attgctttgc tgtctcttgg 180

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<210> 717

<211> 332

<212> DNA

<213> Homo sapiens

<400> 717

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ggctatcctt tgaggcctcg aaccgcctt tcgatgtggg aaggccattt gatctcagga 240
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<210> 718

<211> 155

<212> DNA

<213> Homo sapiens

<400> 718

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tgctaagtga cctcaagatg gagaagatgc tcgag 155

<210> 719

<211> 188

<212> DNA

<213> Homo sapiens

<400> 719

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cagagcaaga agggagacaa gataagccaa tggacacgtc agtggttatct gaagaaggag 120
gagagccttt tcagaagaaa cttcaaagtg gtgaaccagt ggagttagaa aaccccccat 180
cactcgag 188

<210> 720

<211> 176

<212> DNA

<213> Homo sapiens

<400> 720

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agcctccccc agtgctggga ttaaagacgt gagccacggc acctggcctg aattttcctc 120
aaattcaaaa aatcctgatg aaggtttggc taaaatcttt ggtgagctac ctcgag 176

<210> 721

<211> 226

<212> DNA

<213> Homo sapiens

<400> 721

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aaagggtttt cctttttgga tcttaattcc accgtgtata aatatggatg agtggatatg 120
ggttaggggc gaagttattc tcattaatat tcattcattg tggtatcttg ttccatttac 180
tataaaacac attgcatcaa tgcactttta aaaaatctta ctcgag 226

<210> 722

<211> 222

<212> DNA

<213> Homo sapiens

<400> 722

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gaattcgcgg cgcgctcgac gttaatatgg aagtacagtt ggcttcagaa ctgctattg 60
ctgccattga aaaaaatggt ggtgttggtta ctacagcctt ctatgatcca agaagtctgg 120
acattgtatg caaacctggt ccattctttc ttctgtggaca acccattcca aaaagaatgc 180
ttccaccaga agaactggta ccatattaca ctgggtactcg ag 222
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<210> 723

<211> 184

<212> DNA

<213> Homo sapiens

<400> 723

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gaattcgcgg cgcgctcgac ttaagatctt gtggtcacaa ctgatgaaag gcgcccttga 60
catctgtctg tgcctctgtt tctttttgga gatagagtct gtctctgtca cccaggctgg 120
aatgcagtgg cgcgatctcg gctcactgca acctccacct cccaggttca agcgatatct 180
cgag 184
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<210> 724

<211> 304

<212> DNA

<213> Homo sapiens

<400> 724

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ggatgctgta gatgatatgg aagaaggtct taaagtccta atgaaggcag accctggtag 120
acaggaatcc ttgcaagcag aggttatccc agatccaatg gagggagagc aaacctggcc 180
cactgaggag gagctgagcg aggcaaagga tttcttgaag gaaagttcta aggtggtaaa 240
gaagggtcccc aaaggaacat ccagttacca agctgaatgg attttggatg gtggcagact 300
cgag 304
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<210> 725

<211> 234

<212> DNA

<213> Homo sapiens

<400> 725

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gactgccaac aggaagtgtt gtttggttag ttctctccca ctgtgtctacc cctcctttgt 120
ccttagacca acatgtttac ctctctgctt tgccaaactta gccagcaggc catccccggc 180
cctaactgtt cctggccatt atctcttagt tatggctttc acgctctcct cgag 234
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<210> 726

<211> 160

<212> DNA

<213> Homo sapiens

<400> 726

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gaattcgcgg cgcgctcgac gaggggggtg ggttacatga gtatatatat ctttatcaaa 60
actgaaagaa ttgtaccctt taagatttgc aggccaaagt cagtggctca tgctgtgat 120
cccagcactc tgggaggtcg aggtgggtgg atcgtctcgag 160
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<210> 727

<211> 335

<212> DNA

<213> Homo sapiens

<400> 727

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 tgtctgtttg caatatgggg gttagacttt ttttatcatt accttttttt ttctttgggt 180
 gtacattttac cttttttcaca aatactgtaa gctgtcctgc tctttgcagg actacagggc 240
 ctgggagagg cccccagca acaattcacc cacagtgcac ctgcacatgc ctttcttaca 300
 tgcttgctct gtctcgaact agtcacaatc tcgag 335

<210> 728

<211> 425

<212> DNA

<213> Homo sapiens

<400> 728

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 ttccccgcct ctacgtacca ccaccacagc ccggcccaca cccctcacca gcacagcctc 180
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 tccagccccc aatctgcatg tgtccctga gctcttctgt gaaccagag aggtccggcg 360
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 tcgag 425

<210> 729

<211> 137

<212> DNA

<213> Homo sapiens

<400> 729

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 tgatcaagaa gtgtctctcg acagagctga ccctgaggct gcttggaac caacagaggc 120
 tgaagctaga gctcgag 137

<210> 730

<211> 196

<212> DNA

<213> Homo sapiens

<400> 730

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 aaaaaatcaa ttgtatttct agatactagc agcaaacaac taaaaaatga aaattagcca 120
 ggcgcggttg ctacgcctg taatggcagc actttgggag gccagggtg ttggatcacg 180
 aggtcaggag ctcgag 196

<210> 731

<211> 439

<212> DNA

<213> Homo sapiens

<400> 731

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 tctcaacaga atgatcagca gcctcccat agaggccaac aagtaccgag tggccctggc 240
 ccagtacagc gatgctctcc acaatgagtt ccagtgggc accttcaaga acaggaaccc 300
 catgctgaac cacctgaaga agaacttcgg gttcatcggt ggctccctga agataggga 360
 cgccctgcag gagctcacag gacctatttc tctgctccca gaagtggaag agacaagaaa 420
 cagttcccc aaactcgag 439

<210> 732

<211> 259

<212> DNA

<213> Homo sapiens

<400> 732
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 gacccccaaag ctctcgacag accctgagcc agtcttgtaa gcctttgttc tttcttggg 180
 ctatggccgc tcggcactcc tttgtggctt gctcatagat tagctgttct atcagaggcg 240
 cagcttgctc tgactcgag 259

<210> 733
 <211> 231
 <212> DNA
 <213> Homo sapiens

<400> 733
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 tctgaagccc caccctctgga gcgctgcctc tgatcacccc agcccacagt gatctgagtt 120
 cacagagcac atcctgtttg aatgccccat ttgaatcaca gcctattcct ctttttgagt 180
 gttggtttg ccttaagtgc acagatggct tttcaccagc tggacctcga g 231

<210> 734
 <211> 352
 <212> DNA
 <213> Homo sapiens

<400> 734
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 attcagagat attttggaat tatatgactg gaatcttaaa ggtcctttgt ttgaagacag 180
 ccctccctgc tgtccgagat ttcatttcat gccacgtttt gtaagatttc tccagatgg 240
 aggcaaggaa gtgttatcca tgcaccagat ccttctctac ctgctgcgct gcagcaaggc 300
 tctggtgccc gaggaggaga ttgccaacat gctccagtgg gaggagctcg ag 352

<210> 735
 <211> 241
 <212> DNA
 <213> Homo sapiens

<400> 735
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 gggccggaag gaccagggtc accctgtgtg ccttctctgc ctggcaaccc agccaggccg 120
 tcgaaacccc ggtcacccctt ggggccagtt tgtccaggca ttctcttggc tccatcactc 180
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 g 241

<210> 736
 <211> 465
 <212> DNA
 <213> Homo sapiens

<400> 736
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 ggataaccag gaccagggtt tcggccccc actaagggtt accctggacc agagtactag 120
 ttggagccgt acgatagcca ggctggggcg ggccactcct ctgtggagac caagagtaac 180
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 gtggaggctg ttcttcagtc tcaggcgggtg tcgcctgggg tactgggcgt gggggtggcg 420
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<210> 737
 <211> 509

<212> DNA

<213> Homo sapiens

<400> 737

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gaattcgcgg ccgcgtcgac caaccgtcaa aatgtccaaa gaacctctca ttctctggct 60
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ggtttttgggt caccgggtga ctttgccctg tctgtactca tcctgggtctc acaacaggca 180
acagcatgtg ctgggggaaa gaccagtgcc cctactccgg ttgcaaggag gcgctcatcc 240
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actgtgcgg catagaagtg cctggctggt tcaacgatgt aaagataaac gtgcgcctga 420
atctacagag agcctcaaca accacgcaca gaacagcaac caccaccaca cgcagaacaa 480
caacaacaag cccaccacc actctcgag

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509

<210> 738

<211> 343

<212> DNA

<213> Homo sapiens

<400> 738

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gaattcgcgg ccgcgtcgac gagctgggtg gtgggtgtgg agttggctgt gaataatgaa 60
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ttctgtggtt gtcttttcac catcagctag ttttagatagt ttttcggcta cagactctct 300
gataaagctg tactgagcga ttgaattcta gacctgcctc gag

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343

<210> 739

<211> 106

<212> DNA

<213> Homo sapiens

<400> 739

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gaattcgcgg ccgcgtgacg aggggttggg tgtttttttt cttcttttct tttaaataaa 60
aatgctgcaa ggtttccgcc tctgcgttcc cgttgtgctg ctcgag

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106

<210> 740

<211> 479

<212> DNA

<213> Homo sapiens

<400> 740

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<210> 741

<211> 195

<212> DNA

<213> Homo sapiens

<400> 741

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ttttcgaaaa tgataggcaa aagttgggga acattacatg atatccaaaa cacgtttatt 120
ctatatctgt gtttcagatt tcattcttta gcacttggtt tacgagttac tgtgctaact 180

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ccacaaactc tcgag

195

<210> 742

<211> 592

<212> DNA

<213> Homo sapiens

<400> 742

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gaattcgcg cgcgctcgac cccattggct gaagatgaga ccattcttcc tcttggtgtt 60
tgccctgcct ggccctcctgc atgcccaca agcctgtctcc cgtggggcct gctatccacc 120
tggtggggac ctgcttggtg ggaggaccgc gtttctccga gcttcatcta cctgtggact 180
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<210> 743

<211> 367

<212> DNA

<213> Homo sapiens

<400> 743

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catctttttt taaataatag ctttattgaa gtatacagtc atgttgagaa atgcgtcatt 120
agacaatttc gtacatgcgt gagcatcaca gagtatactt atattaaccg agaggatata 180
cctacccac acctaggcta tatgatatag tctattgctg ctagtctgca aacatgtgca 240
gcatgttact gtactgaata ctgtaggcaa ttgtagtaca atggtatttg tttatctgaa 300
catactctaa ctaacaaaag tacagaaaaa tgtgatataa cagattttta aaaggtacgc 360
gctcgag 367

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<210> 744

<211> 655

<212> DNA

<213> Homo sapiens

<400> 744

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gaattcgcg cgcgctcgac tccaaatgag aaaaaagtgg aaaatgggag gcatgaaata 60
catcttttcg ttgttggtct ttcttttgct agaaggaggc aaaacagagc aagtaaaaca 120
ttcagagaca tattgcatgt ttcaagacaa gaagtacaga gtgggtgaga gatggcatcc 180
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cagcaagtct tgcgagtaca atgggacaac ttaccaacat ggagagctgt tcgtagctga 420
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cgtgtattgt ggtctcaaga cttgccccaa attaacctgt gccttcccag tctctgttcc 540
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tgatatcttc cggcaacctg ccaacagaga agcaagacat tcttaccac tcgag 655

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<210> 745

<211> 268

<212> DNA

<213> Homo sapiens

<400> 745

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gaattcgcg cgcgctcgac cattgtcaaa cttgacctt taaataatct gatttaactc 60
ctttttaatt taaatcctgt ttttaattcat gacctggaa gctatatata taataacctt 120
tttttctatt tttagtggga caactagtgg tttgaagagc cagggccgctc tgtcagtagg 180

```

aagtaatcgt gatcgagaga tcagcatgtc tgttgggtctg ggaagatcac aattagattc 240
 taaaggagga gtagttggag ttctcgag 268

<210> 746
 <211> 181
 <212> DNA
 <213> Homo sapiens

<400> 746
 gaattcgcgg ccgcgtcgac ataagttaaa gatgtatagc gtgtataata ccttactata 60
 ccttatcata gtgattcacc ttaccatagt gaaccttaaa atagtatact tctggccagg 120
 cgcggtggct tacgcctgta atccaacac tttgggagggc agaggtgggc cgaacctcga 180
 g 181

<210> 747
 <211> 694
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (35)

<400> 747
 gaattcgcgg ccgcgtcgac ataaaaagaa aagtnagggg ggtattgaaa tcgttaaaga 60
 gaaaacaact aggagcaagt caaaggagag gaaaaaatct aaaagcccat ccaaaagaag 120
 taagtctcaa gatcaagcaa ggaaatcaaa atcccctacc cttagaaggc gatctcaaga 180
 gaaaattggt aaggccagat ctccctactga tgataagggt aaaattgaag ataaaagtaa 240
 atcaaaaagt agggaaaaat ccccaattat aaatgaaagt agaagtcgcg atcgaggtaa 300
 aaaatccaga tcccagttg atttaagagg taaatccaaa gacagaaggc cacggtccaa 360
 agagagaaaa tcaaaacggt ctgaaactga taaagaaaag aagccaatta aatctccctc 420
 taaagatgct tcatctggga aagaaaatag gtcaccacgc agaagacctg gtcgtagtcc 480
 taaaagaaga agtttgtctc caaaaccacg tgataaatca agaagaagca ggtctccact 540
 tttgaatgat agaagatcta agcagagcaa atcccctcg cggacactgt ctctggggag 600
 aagagccaag agccgatcct tagaaagaaa acgacgagaa ccagagagga gacgactttc 660
 ttctccaaga tccccttaag aacacgacct cgag 694

<210> 748
 <211> 714
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (672)

<400> 748
 gaattcgcgg ccgcgtcgac cataaagtta attctcataa tttttgctgg gtttaataat 60
 tcaaaatatg aatcaaaatt tttatttatg cagtttcatt ctattaaaat tatctgctaa 120
 attaatatta agtagtccca tagcatatat tatttaataa ttgcaagtag tgacatatca 180
 taaataaact gtataatatg tattattgat tctgttattt tatttttcct agcaatgcac 240
 agggaaaccag taaatttcac aagcagagaa tactaacttg tcattttatt aatattctaa 300
 acaaatgaag ccgcctctat aagtgaattt tctggacttc taaagatgag cattgttgag 360
 tttataaact caaattttta ttgtgttaag taaagtatat taaatataac ctacacctaa 420
 tgactcagct gtaattaaaa aagaattcac gaccagcctg ggtaacacgg tgagacccca 480
 tctctacaaa aataaaaaat aaaaaatgaaa attaaaaaaa attagccagg catggtggca 540
 tatacccaag tactctgaag gccgaggggt gaggattgct caaacctagg agtccaaggc 600
 tgtagtgacc tgtgatagtg ccactgtact ccagcctggg aaacagagca agaccctgtc 660
 tcttaaaaaa cnacaacaaa cctacacatg aaaattattg ctgcttcctc cgag 714

<210> 749
 <211> 466
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (25)

<220>
 <221> unsure
 <222> (230)

<400> 749
 gaattcgagg cgcgctcgac gtgtnggaga aaaaactgct gagaagccaa agaaactgcc 60
 accacagggg agacagagtt tgttggtcaa atcccaccaa gtagaggagg gcttggtaaa 120
 caccttgggg tttccactga aacttcaaaa agatgggtca tgcttttagaa gtaaagattg 180
 agtttaaat aaggacagaa aaatattgat tggatttgcc ttttgaccn actcaggaac 240
 aatttcgggt taggaatggg tatgggagag agagagaaga gcaggctaac gaaatagcaa 300
 acaactcttg agagagtctg ttgtatggag aaataggggt gtatttggat ggggaagttt 360
 tgtttcttag gatggaagac actagagcaa gtctgtttt tgggttttt ttgagatgga 420
 gttttgcttt gttgcccagg ctggtgtgca gtggtgcaat ctcgag 466

<210> 750
 <211> 602
 <212> DNA
 <213> Homo sapiens

<400> 750
 gaattcgagg cgcgctcgac agtaacactt aactcttcta taagtaatag aatctattta 60
 gttttgaaga gtagtgata gattgcaagc tcattaccta gtttcacttt caaccagaac 120
 tggaagaaat attaagtggg acaattacac taaaaatatg caaagtatac attttaagta 180
 ttttatgttc cagaacagct gccacatgtg atactataat caatctaata gaaataaaag 240
 tccacctctt cttagaacat aggttctcca ctggaggcag ttttctccc cagggggatg 300
 ttgacaatgt ctggacacat ttttggtttt cacagcggg ggagagaggg actgtgtgcc 360
 attggcctct agtgataga ggccggggat gttgctaaac atcctacaat gcagagaatc 420
 acccactgac gacaatgaat ttttctgtcc aaaacgttaa cagtaccaag attttgaac 480
 cctaccttaa gagtatacat aaggtaatgc ttttctaaaa ggtctgtgtt agagttgcat 540
 atgtatccag caacatgtga gccctaggac agggctttgc ccataatacc ccctcactcg 600
 ag 602

<210> 751
 <211> 353
 <212> DNA
 <213> Homo sapiens

<400> 751
 gaattcgagg cgcgctcgac gattaaagga tttacctgaa gagaaagcat tctattcatc 60
 agagactgga caagagttac tcttgcatth ggcaattaaa gatgatgttt ccatggaaac 120
 agttgatcct gctttcattc attggctgct taggagggtga gcttctctta caaggccctg 180
 tatttatcaa agaaccagc aacagcattt tccctgttgg ttcagaagat aaaaaataa 240
 ctttgcatth tgaagcaaga ggcaatccat cacctcatta cagatggcag ctgaatggaa 300
 gtgatattga tatgagtatg gaacatcggt ataagttgaa tggaggactc gag 353

<210> 752
 <211> 265
 <212> DNA
 <213> Homo sapiens

<400> 752

```

gaattcgcgg ccgcgtcgac ggggcagggg taaattcgta aaaataaaaag aaatctttat 60
taaaacaaaa tgccatggaa attttttaga gaattctcat agttatacta aacctgagga 120
aaaataacat aatattgact gtttaagag aactctgttt tcaagcctgt aaaactaatt 180
gatataattt tctacctaga atttagatat tatgaaattt ttttttgta ttgttttttt 240
ctttaggatc acagtatcac tcgag                                     265

```

<210> 753

<211> 589

<212> DNA

<213> Homo sapiens

<400> 753

```

gaattcgcgg ccgcgtcgac cactttacct gtctgtaaga tggacatggt taggtctacc 60
catgagggct atgtggggat tggagaaaat ggaagtaaag aactagtcca gagccaccct 120
tggtgaaaag ccactgtcat catcatttac catcgtcatt ctccatccca gccatccacc 180
caccaccgc cagcgtgctc ttctctgtg accgatgtct cccgtgtagc catgaacctg 240
catgctcagg atgcagacga cggtttgga agagggtgcg tgactgccgt gtgggactgc 300
atgtcagctt cccatgaagg ggcaccttggt gtgagctcac tgtttcctaa cggcatctgg 360
cattttctcc ttcccatatt gaccatgtca gttatcacca tcctacacga ctgctcactt 420
catttaaaaa aaccagttt gctttttttt aaacctttta tgtattctaa gtgatagaag 480
gtatggtctt ggtctacgat atgtttttta tttttctga aatacataaa tattaataa 540
aaattgtgct atgtttccaa ctaagatcat cttgaatctc accctcgag 589

```

<210> 754

<211> 360

<212> DNA

<213> Homo sapiens

<400> 754

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gaattcgcgg ccgcgtcgac taagtacagc aaaaaagaaa gggggggaag aaaagaagaa 60
ggaagaggaa agggaggagg aggatttatc attcacttac actagaacaa gtgaaaatag 120
ataatagcta taatttactc acatcttacc taaaacacaa attcagggtg atttatgagc 180
aagtcatttt ccggtgggct ttcgatagtg tgtgaatttg gaatgaatgc tggtaacttc 240
agctcccttc cactgcagc accaggaagc cattgtgtg gggaggccac caacttggct 300
ggcatgttgc ttctgcctca gttagtgatg atggtgattt ggagagaaaag gacactcgag 360

```

<210> 755

<211> 536

<212> DNA

<213> Homo sapiens

<400> 755

```

gaattcgcgg ccgcgtcgac gttgggatat ggggtggttg actaaagaat gggtccttct 60
tctaattcgc caaatttttc atccagatta tggcatgttt acatatcaca aggattcaca 120
ctgccatttg tttagcagct ttaaattgtg taactattct gaattccgat tggttggaat 180
tcttatggga ctagctgttt ataacagcat caccttggat attcgtttcc ctccctgctg 240
ttacaagaaa ttattgagcc ctccatcat tcctagtgat caaaatatac cagtaggcat 300
ctgcaatgtt accgtggagc acttatgtca aattatgcct gagttggccc atggattaag 360
tgaactctta tcacatgaag gcaatgtcga agaagatttc gattcaacat ttcagggtttt 420
tcaagaagaa tttggaacaa tcaagtccca taatttaaag cccggtggtg ataaaatttc 480
agttaccaat caaaatagaa aagaatatgt acagctttat accgacttcc ctcgag 536

```

<210> 756

<211> 388

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (192)

<400> 756

gaattcgcg cgcgctcgac cgaaggtgga ggtggaagac cagggatgca cagctcagaa 60
 ggcaccaccc gtggtggggg gaagatgtcc ccctacacca actgctatgc ccagcgctac 120
 taccocatgc cagaagagcc cttctgcaca gaactcaacg ctgaggagca ggccctgaag 180
 gagaagggaag gngaaggga gctggaccca gctgacccac gccgaaaagg tggccttgta 240
 ccggctccag ttcaatgaga cctttgcgga gatgaaccgt cgctccaatg agtgggaagac 300
 agtcatgggt tgtgtcttct tcttcattgg attcgcagct ctggtgattt ggtggcagcg 360
 ggtctacgta tttcctccaa agctcgag 388

<210> 757

<211> 259

<212> DNA

<213> Homo sapiens

<400> 757

gaattcgcg cgcgctcgac cttagcactt caatttaaaa acatagaggt ggaattttta 60
 atgtattttt gagttgactt tggcaggctg aaagaaagta aattaaaaaa aaaaacaaaa 120
 acctagagct gttgctctcg gagataagct ctgggaaaac ttatcttagt acctcatgct 180
 atttttaaaa cagtacattt atttttgcca gctgataccc ttctgtgagg agttgaattt 240
 gaagaccact gggctcgag 259

<210> 758

<211> 258

<212> DNA

<213> Homo sapiens

<400> 758

gaattcgcg cgcgctcgac gtcaccacgc ccagcccaag aaagatacat ttttaaaaac 60
 agctttattg tgggtataatt gacgtaaaat gtacatactt aaagtataca gtgtgatgtt 120
 ttgatataata tgtatactct tgaaaccacc accacagtta aaataatgaa aatgtccatt 180
 acctccagaa gtttcttcat gttttgttgt aatctctcct tctcctccct gattcctccc 240
 catccccagg cactcgag 258

<210> 759

<211> 177

<212> DNA

<213> Homo sapiens

<400> 759

gaattcgcg cgcgctcgac agtatttaca gtttgactga cattgcttgg ctgcccataa 60
 taaagtgttt tgcttggtg ctattgaatg ctttttaact tagtttttag acaattttgc 120
 aggctttatt taagcatgtt gtattttgga ctgaggcaag tctttgcgga actcgag 177

<210> 760

<211> 166

<212> DNA

<213> Homo sapiens

<400> 760

gaattcgcg cgcgctcgac tgtaaatctt gtaattaatg gtcaaactgt ataaagggat 60
 tggtagtcaa aacatgtaca aagaaatacc tgtaaaactg ttttgtctca tgttttattg 120
 gaccaaagtt gtggtttgta tggagtgtag tagtagtgga ctcgag 166

<210> 761

<211> 208

<212> DNA

<213> Homo sapiens

<400> 761

gaattcgcg cgcgctcgac accaaatcac gggactgttc agcaciaaga aactgaactt 60

gccaatgttt acagttctga gaaggttctc catcctgttt acaatgtttg ctgaaggagt 120
 tttactcaag aagacttttt cttgggggtat taaaatgact gtatttgcaa tgattattgg 180
 agcctttgta gctgccagct ccctcgag 208

<210> 762
 <211> 289
 <212> DNA
 <213> Homo sapiens

<400> 762
 gaattcgcgg ccgcgtcgac aaacatactt gtttttaact ctcaggaatt tcatgaggaa 60
 caagttaaag ttttatatat atctatgtat gcttttcata aaccacaaat aagtttatac 120
 acttttagctg gaacttttta taatttcaga ggggttattg aactgactgt tggcattgga 180
 tataagaatt tggcttcagg catttgctat tgaggtttta aaaatgttta aatatcttac 240
 tgtaattttt ttgttttgtt atttgggaca atgcagctgt aatctcgag 289

<210> 763
 <211> 207
 <212> DNA
 <213> Homo sapiens

<400> 763
 gaattcgcgg ccgcgtcgac gaacagttag tagtagggct aagatttggg ttcagatttt 60
 atttccaact agaaagacca ttttaacact gttttgggta ttgtttgtag agagctttct 120
 aaataagtgg gtacctttat tatgattaag aaagtaattg actatttggg aggatttcat 180
 acagaattat tgataagcac gctcgag 207

<210> 764
 <211> 358
 <212> DNA
 <213> Homo sapiens

<400> 764
 gaattcgcgg ccgcgtcgac gagaaggagg ggaacaagca gagactttta ctgggacaag 60
 taaatcaagc cttcagcaac tcaaggaaca aacatacaag acaagctcaa ctctcgtta 120
 agaccaaatt aggataacac tacaagaaaa taaattgttt tatctggttg tgggtccttg 180
 gggatagtta attgactact caaataacaa ctttgatagt atatgaactg tgactgtgtt 240
 agtaggtttt aattagcagg aactttttgt aaattggaca aaaacttttt ttattatgac 300
 taggaaaact gctgttttct atttttgttt tgctctttta aataataaccg aactcgag 358

<210> 765
 <211> 178
 <212> DNA
 <213> Homo sapiens

<400> 765
 gaattcgcgg ccgcgtcgac ctactgtttt ctgtgttata ctttgtgtta gtgcagagtg 60
 tttggtgtaa ctggctatcc ttttggatc tttttgttat ttaataattt ttaattgttt 120
 acacattttt agaaagtatt cgtttccgta taggatgatt gtatgggtct ttctcgag 178

<210> 766
 <211> 103
 <212> DNA
 <213> Homo sapiens

<400> 766
 gaattcgcgg ccgcgtcgac ttgaattcta gacctgcctc gagttgccta ctgatttcaa 60
 gtattacatg aagcttgtaa aaataacaag cagttacctc gag 103

<210> 767
 <211> 407

<212> DNA

<213> Homo sapiens

<400> 767

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gaattcgcgg cgcgctcgac ggcaagtctt aaaaactcga tttttatttt tatttgatt 60
tacttatttt gtttatttat ttgagacaga gcaagactcc gtctcaaaaa aaaagcaaaa 120
caaaaaacaa aacaaaaaca aaagagggtgc aggccagaat tgtccccgtg gacatagtgt 180
gtcaattaga ttgcatactt taatccagcc tcagttgggtg tgtctgggtt ttctggctag 240
gaagaatgct gctgtggaat gtgctggaac agatccttac gtgcgctgtg ttggagtctt 300
tccaggtcag gggttctcaa acggatttca ggacccttta catcatccag aatgatccaa 360
tagccccagg agcctgtgtc tgtgtggatt atatctgccg gctcgag 407

```

<210> 768

<211> 268

<212> DNA

<213> Homo sapiens

<400> 768

```

gaattcgcgg cgcgctcgac gttcattgag gtttaagaga ataaaagaaa caaaaaaga 60
acttcacaat tctccaaaa caatgaacaa aacaaaccaa gtgtatgcag caaatgagga 120
tcataactct cagtttattg atgattattc atcctcagat gagagtttat ccgtcagcca 180
cttcagtttc tctaaacaga gccacagacc aagaactata agagacagaa ctagtttttc 240
ttcaaaattg cctagccata aactcgag 268

```

<210> 769

<211> 372

<212> DNA

<213> Homo sapiens

<400> 769

```

gaattcgcgg cgcgctcgac aaattactta taaatttttt atagtgtgat ttttgacctg 60
ccttttatat gtatgaatat ttcatagttt tgcataatcag atgtaggcat acagacaaat 120
acataaacca atgaatatat tacatattct gtgttccaat aaaactttat ttatggacac 180
taaaatttga atttcataaa attttcccat gtcaagaata caaaataactt gagttttgtt 240
tttagctatt taataatagg tctcatttat tccacaggct gtagtttgta gtcttgcttg 300
aaacaataga aacagactga ttaagcagga gaagtttttt gaaagaattt tgtttggctc 360
agcaatctcg ag 372

```

<210> 770

<211> 126

<212> DNA

<213> Homo sapiens

<400> 770

```

gaattcggcc aaagaggcct agggggtaat ttacatatgg ggtgtatata ttctaaaaat 60
agtaataaaa gtacctttta taagcaatgt tgtgtggcct gtagaagaaa gcaggggagga 120
ctcgag 126

```

<210> 771

<211> 311

<212> DNA

<213> Homo sapiens

<400> 771

```

gaattcggcc aaagaggcct agtagaactc aagaagacag actaccaagg gtcacttgaa 60
gtcgtgattg ggtcactaat aacaccagga caaagttaag ggatcactac tcaagcataa 120
gccccagttt tcataagact gctgtgaaga tgtttgatat aaaggcttgg gctgagtatg 180
ttgtggaatg ggctgcaaag gacccttatg gcttcttac aaccgttatt ttggccetta 240
ctccactgtt cctagcaagt gctgtactgt cttggaaatt ggccaagatg attgaggccg 300
ggaaactcga g 311

```

<210> 772
 <211> 185
 <212> DNA
 <213> Homo sapiens

<400> 772
 gaattcggcc aaagaggcct aaagtcaaga acagtttttc actgcagctt ttagatatat 60
 tttggtcata tactgtttac acaattgccca attcttgcca aatttgtgtt tgtgcatttt 120
 attttcctcc tttaatgtac tgctctgcaa ttatgcttgt aaaatgtttt tctgtttcac 180
 tcgag 185

<210> 773
 <211> 262
 <212> DNA
 <213> Homo sapiens

<400> 773
 gaattcggcc aaagaggcct atggtgaccc agccagataa tagtatcttg agcaaataat 60
 agtatcttga gtgcaataa gcaggaagac tgccttcaa aaaatgtggg gttacatgat 120
 tttcagagcc tttttttcag agttgagcat cttttctttt aaaagaaata aggggcaaga 180
 ggaccaattt tattccttga ggaaaaatga cacacccttc tcccaaaaga aagaaaactc 240
 tctggccccc ccccttctcg ag 262

<210> 774
 <211> 430
 <212> DNA
 <213> Homo sapiens

<400> 774
 gaattcggcc aaagaggcct acacagactc ttgcaagctg gatgccctct gtggatgaaa 60
 gatgtatcat ggaatgaacc cgagcaatgg agatggattt cttagagcagc agcagcagca 120
 gcagcaacct cagtccccc agagactctt ggccgtgatc ctgtggtttc agctggcgct 180
 gtgcttcggc cctgcacagc tcacgggcgg gttcagatgac cttcaagtgt gtgtgaccc 240
 cggcattccc gagaatggct tcaggacccc cagcggaggg gttttctttg aaggctctgt 300
 agcccgatct cactgccaa acggattcaa gctgaagggc gctacaaaga gactgtgttt 360
 gaagcatttt aatggaaccc taggctggat cccaagtgat aattccatct gtgtgcaaga 420
 agatctcgag 430

<210> 775
 <211> 223
 <212> DNA
 <213> Homo sapiens

<400> 775
 gaattcggcc aaagaggcct atagagacat gaagaggctt gaagaaaagg acaaggaaag 60
 aaaaaacgta aagggatttc gagatgacat tgaaggaggaa gatgaccaag aagcttattt 120
 tcgatacatg gcagaaaacc caactgctgg tgtgggtcag gaggaagagg aagacaatct 180
 agaatatgat agtgacggaa atccaattgc agttctccct ata 223

<210> 776
 <211> 243
 <212> DNA
 <213> Homo sapiens

<400> 776
 gaattcggcc aaagaggcct aaagattcga acaatgagtt taccagctct gagaaaaatg 60
 aactgctcca gaaccttcaa gaatgtttct ctgtatcacg cccacatcac accgaatcca 120
 tttgtcgtca ttgcagagtt catctttctg gttttgagca ccatctcaca cagttctttg 180
 tctttttcca gtctgctgtt gactgggtta gctcagccc aaaggtgccc cactccctc 240
 gag 243

<210> 777
 <211> 249
 <212> DNA
 <213> Homo sapiens

<400> 777
 gaattcggcc aaagaggcct agagcaagga ggtactctga gagctctggt ttgcagaaag 60
 agagaaaaga caggatagat gaagagtagc caaaactccg tagaactggg gggagttact 120
 gagcagacag gatggcatca cagagtgtgc catgggtggg taggagggcg gccaacaggg 180
 acagaggagg gtccctctgcc agggagagaa acagagggaa ttgggggaa accagttgca 240
 gatctcgag 249

<210> 778
 <211> 287
 <212> DNA
 <213> Homo sapiens

<400> 778
 gaattcggcc aaagaggcct acaaaaacca caaaagtgtc tacaagtctc ctggcataac 60
 tctattttca gacactgaat ctgcagtagc aacctgtttt ctccaccagc ctagggttca 120
 taatcttate tgcttgcacg gaccagaaa taaatcagag tacagcccca cctggggccac 180
 tatctatagg acaaacacgt ccttccacct gcatttcact ctctccaacc cagggacttt 240
 gttttctttt aacttttatt ttgggttggg tcaggggtat actcgag 287

<210> 779
 <211> 314
 <212> DNA
 <213> Homo sapiens

<400> 779
 gaattcggcc aaagaggcct actttcataa atagaatttt catttttata aaattcaatt 60
 tataattttt tatggtttct ctttattaat cccattttaag aaatctttgt gccatgatta 120
 tgaagatgca ctctaattgt tttttccaga agctctgtag gtttagcttt tacctttctg 180
 ggtttgtttt gttttgtttt tttagatgg agtcccactc gtgtcaccca ggctggagta 240
 caatggtgca atctcgggtc actgcaacct ccacctcccg ggttcaagca attcccctgt 300
 ctccacctct cgag 314

<210> 780
 <211> 502
 <212> DNA
 <213> Homo sapiens

<400> 780
 gaattcgcgg ccgcgtcgac cggagcagcg cctattagtg tcatcctcac cgtcacggcc 60
 ggcgcctcct cctggattca ttcactcgtt cttttcattc acgaaggtag tgaggcctag 120
 tggaaaagcca tggagagcgc tctccccgcc gccggcttcc tgtactgggt cggcgcgggc 180
 accgtggcct acctagccct gcgtatttcg tactcgtctt tcacggccct ccgggtcttg 240
 ggagtgggga atgaggcggg ggtcggcccc gggctcggag agtgggcagt tgtcacaggt 300
 agtactgatg gaattggaaa atcatatgca gaagagttag caaagcatgg aatgaagggt 360
 gtcccttatca gcagatcaaa ggataaactt gaccaggttt ccagtgaat aaaagaaaaa 420
 ttcaaagtgg agacaagaac cattgctggt gactttgcat cagaagatat ttatgataaa 480
 attaaaacag gcactactcg ag 502

<210> 781
 <211> 217
 <212> DNA
 <213> Homo sapiens

<400> 781
 gaattcggcc aaagaggcct agagagagag agagagctat taataaaaca gaggagtaca 60

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ttttaccctt gcaattccag tcaatactgt ggtgtcattt cagccaacat accaaccattc 120
agtcaaattcc caaagccaaa tggataattt cagatgggaat ggagtttagac aggaactggc 180
ttccctttct cctgttacta tgaggacaac cctcgag 217

```

```

<210> 782
<211> 219
<212> DNA
<213> Homo sapiens

```

```

<400> 782
gaattcggcc aaagaggcct aggaatcatt gcttactggg tagagaattt ctgttcggga 60
tgaaaatttt tagaaacaga tagtggcaat agttatataa cagtgtgaat gtaattaatg 120
ccactgaact gtacagttaa aaatggttaa catggcaaac ttatatctat ttgcccacaa 180
ttaacaacaa caaaaaaagc atgggctatt agactcgag 219

```

```

<210> 783
<211> 257
<212> DNA
<213> Homo sapiens

```

```

<400> 783
gaattcggcc aaagaggcct aggggagcgt tgtgttccat gctgctgtcc aggcacccag 60
cggcatgagt agcctatgca acctttagag caaggcgggc gcggcttcgc atcccaacat 120
gggcactgta tgatgtcccg catcaggctt tcttatgtct gcctggagac cctaattatg 180
ggcggcataa tttgtccttg acggtctcat gcattttctg ggctgaatat ccggcaagca 240
ccagggttta gctcgag 257

```

```

<210> 784
<211> 218
<212> DNA
<213> Homo sapiens

```

```

<400> 784
gaattcggcc aaagaggcct attggaaaat agctgtgctg tcagcttttt gaggggggga 60
tttgttttgg tcagtcagtt ttatcataaa tttggcattt ggggttaaac agcaacatgg 120
aacaataat ttttagatgt tggaaattcc tggttttttt tgttttgttt tgttttgttt 180
ttttgagaca gcgtctttgt cacctgggcg ttctcgag 218

```

```

<210> 785
<211> 197
<212> DNA
<213> Homo sapiens

```

```

<400> 785
gaattcggcc aaagaggcct acttgttcca gcgagttgac tataattttt tctaccctgt 60
tatctacctc tagctccatt gaacatcttc cttctgttaa gtgatagcca taagttctta 120
gtagcgaaat tattggatca aagagtagga caatttttat ggcactttta atgtgtgttt 180
tcaggcattg cctcgag 197

```

```

<210> 786
<211> 125
<212> DNA
<213> Homo sapiens

```

```

<400> 786
gaattcggcc aaagaggcct agtgccaaca aaatttaaatt ttttctcatt aggattcaga 60
tttcagatta ggcaaacagt ttgggttgatt ctgtgatgta tgtaaagggtt ggaaggggctc 120
tcgag 125

```

```

<210> 787
<211> 204

```

<212> DNA

<213> Homo sapiens

<400> 787

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gaattcggcc aaagaggcct agtgattata aaattccatt tgattctttg tttttctcaa 60
attgcataag cagtgaagtag gaagaagatg atgaaccaca ggaggagtag tcagaagggg 120
agaagaacga gaaaagtaat gtcacagact gtgagggaaa attatccaca aagatgggat 180
gttacagtgc cagatgagct cgag                                     204

```

<210> 788

<211> 493

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (18)

<220>

<221> unsure

<222> (181)

<400> 788

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gaattcgggc aaagaggncct accccagctg atcttgaact ccagagctca agtgcctc 60
ctgtcttgcc ctcccaaagt gcttgaatta caggcatggg ccacagtgcc cagctgggaa 120
tgatttttag acagcaatct tagtgcttgg ttaatttttg ctttgcattt taaacatgtc 180
ntctctgttt ttttcattcc ctttaccatt tataattttc ttcattattt cactatgaac 240
taatgtaaac acaaaacatg ttcattcctt gaatgtaagc tacacactta aacctttttt 300
gatacacttc ccagttttatc tgatgccata tgaaaaaact tggattttatc tccagattcc 360
tccatatctt gtctttctgt ggatggctca taaagtgtgc gtgtatgtgt gttgtgtttg 420
ctagatacat tataattatt gttatttatt tatttaaaga aaggatcttg ttctgttgca 480
gtggcatctc gag                                     493

```

<210> 789

<211> 151

<212> DNA

<213> Homo sapiens

<400> 789

```

gaattcggcc aaagaggcct acgattgaat tctagacctg cctcgagcta tgcgtttgta 60
tttcttgctc cagcctctga atgttatctt caagttgctt gactctgaac tcctcctctt 120
cagactgccg ctccttgact tccccctcga g                                     151

```

<210> 790

<211> 360

<212> DNA

<213> Homo sapiens

<400> 790

```

gattggctgt tagctttgag ctcagagaga aaaatacatt tagaagtttt tattgtgttt 60
tcttttagtta cggtagcgta gaataagggg acttaaaatt ggatcccttg aaatttatatg 120
ttaattttaa aaataagttt attaggtgga aggttctgta tcttttatca aaattgcaaa 180
ggagtctgtg aaataaaaag tactcagctt agattctaca gtatttcaaa ctgtcttttt 240
ggattttttt tttgagacag tcttgctctg ttgccaggc tagaggacaa gtagtgcggt 300
cttgactcac tgcaacctcc gcctcccatg ctcaagctat tattctcatg cctactcgag 360

```

<210> 791

<211> 281

<212> DNA

<213> Homo sapiens

<400> 791
 gaattcggcc aaagaggcct agagggatgg agagagagat gaaggaactg cagacccagt 60
 acgatgcact gaagaagcag atggaggtta tggaaatgga ggtgatggag gcccgctctca 120
 tccgggcagc ggagatcaac ggggaagtgg atgatgatga tgcagggtggc gaggggcggc 180
 tgaagtatga gcgggctgtg cgggaggtgg acttcaccaa gaaacggctc cagcaggagt 240
 ttgaggacaa gctggaggtg gagcagcatg agcaactcga g 281

<210> 792
 <211> 279
 <212> DNA
 <213> Homo sapiens

<400> 792
 gaattcggcc aaagaggcct acaggtgact cgaatgaact ctgcattttc aacgtgcctt 60
 ctactgcttc aggacctggg ggtccccctg accctcactg gcttgcccc agccctgggc 120
 ctggccccac ctgtcctgga gccagagcc cctggcctgg agctgcctct ctggggtggg 180
 tctcaggccc caccctctcc tcttttgagt tcagtgcctt gctcagcccc tcccctgtat 240
 ctcagcgtct tgagacctct gacagagcga caactcgag 279

<210> 793
 <211> 326
 <212> DNA
 <213> Homo sapiens

<400> 793
 gaattcgcgg ccgcgtcgac ctaaaccgtc gattgaattc aaggcctacc tgggaagaag 60
 taaaagagca actagaaaag gaaaagaaag gctccaaggc tttggctgaa tttgaagaaa 120
 aaatgaatga gaactggaag aaagaactgg aaaaacacag agagaaattg ttaagtggaa 180
 gtgagagctc atccaaaaaa agacagagaa agaaaaaaga aaagaagaaa tctggttagt 240
 attcatcttc ttcttcatca agctctgatt ctccagcag ttcttctgat tctgaagatg 300
 aggataagaa acaaggaaaa ctcgag 326

<210> 794
 <211> 239
 <212> DNA
 <213> Homo sapiens

<400> 794
 gaattcgcgg ccgcgtcgac gacaccatgg ccaagctcat tcttgtcaca ggtctggcaa 60
 ttcttctgaa cgtacagctg ggatcttctt accagctgat gtgctactat accagttggg 120
 ctaaggacag gccaatagaa gggagtttca aacctggtaa tattgacccc tgctgtgta 180
 ctcacctgat ctatgccttt gctggaatgc agaataatga gatcacttac acactcgag 239

<210> 795
 <211> 100
 <212> DNA
 <213> Homo sapiens

<400> 795
 gaattcgcgg ccgcgtcgac attgaattct agacctgcct cgagtgaagt acccaatgag 60
 gaacctaaag ttgcaacagc ttatagacct caagctcgag 100

<210> 796
 <211> 714
 <212> DNA
 <213> Homo sapiens

<400> 796
 gaattcgcgg ccgcgtcgac ctactagct aaaaaaattc cttggggtct ggagtcacat 60
 aaattatttt caatgcctgt tatttcaact ttgattttcc acaagatgac aagcctcttg 120

```

gagatacctc cttgtatcta cttccaggt tattagatac attattttcc caggtaacatt 180
atagttttccc agatacatgt atagctttcc cagatacggt atttttccat tatatagcaa 240
aattttacat ctgtggatta gaaattaaat ttcacaaagc acctaaagaa gtcttaactg 300
ttctaaatct taagtgaata aagacctggc atgtgtttgt gttgtgtatg tctctctgtc 360
tctctgtgtg tgtgtgtgtg cgcgcgtgcg tgcgtgcgca ttggtatcag ttctgaaagt 420
gtatattggg gtctaagtta ggctcatgct ctcagaaatt tgatgcaaca tgcttggatt 480
attttgttca atatgagagt taaaaagtac attatagtgc tattttggaa aagaaaagaa 540
agcttttcag tagtaacctc acattttgca ttgtatatgt taccttttgc ttctttttct 600
tacacacgta tacaaaagta cataatgata atggtatcat tattgttgtt tttgttaacc 660
ctcatggatc actgtttccc aggttctctg ctaagtacca tacatgctct cgag 714

```

<210> 797

<211> 180

<212> DNA

<213> Homo sapiens

<400> 797

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gaattcgcgg ccgcgtcgac gagggaggtg gtggtagttt gtgtttaata tttctagtta 60
agctggtgag agaagagagg aggaaaggtt tcctaaggaa gtagatagct gagttgagtc 120
attagagata aataagagct aatgagaaaa tatgtgggca gtatagtgtt gggactcgag 180

```

<210> 798

<211> 165

<212> DNA

<213> Homo sapiens

<400> 798

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gaattcgcgg ccgcgtcgac agggcatctt gatatgctgc tcagtctctg ccttcttctc 60
ttccagatac actgtgcaga tgaagtcacc ggcattgctg gtccactgg cagtgccagc 120
cacgcgcac cttcacaatgg cagtgatctc ccccgctgc tcgag 165

```

<210> 799

<211> 422

<212> DNA

<213> Homo sapiens

<400> 799

```

gaattcgcgg ccgcgtcgac gaattctttt taaattttat tctggttggg attggctggg 60
cttctgaaat cttgtggatt tttatctttc taagtttggg aaaatttttt cagccatttt 120
cttaaaatac agcttttccc catttctcct tcttccctga gactacattt aaatatatgt 180
tagactttct cactatatct acttctgtgt tctttttgta tttaaccaac ttttttcttt 240
gtttgttgaa acaaggcttg gctctgttgc ccaggctgga atgtagcggg atgatcgtg 300
ttcactgcaa cctctgcctc ctgggctcaa tcgatcctcc caccctcagc tcccaagtta 360
gctcgcata catgccacca ttcctggcta gtttttgtat cttttctaga gacagactcg 420
ag 422

```

<210> 800

<211> 329

<212> DNA

<213> Homo sapiens

<400> 800

```

gaattcgcgg ccgcgtcgac cccccagggt caagcaatcc tcccatttca gcctcccggt 60
tagctgggac cacaggcatg tgccaccaca ccttgctaag ttttgttttt tgtttgtttg 120
tttggtttgt agagaaaagg ttttgccatg ttgtccagat tgggtctcaa ttccctggact 180
caagcaattt gccaccttg gcctctcaaa ccgctgggat tgcacgcag aaccacctca 240
accagccata ttctgtttct attataaatg atgagattaa gcgttcagac tgctgtttgc 300
aaacagtttt cacaaatggt acactcgag 329

```

<210> 801

<211> 436
 <212> DNA
 <213> Homo sapiens

<400> 801
 gaattcgcgg ccgcgtcgac gtagaacagt gattactgga ggctgggagg aaagggaggt 60
 ggatattggag aggttgggta acagatacaa aattacggct agataaaaagg aataagttct 120
 agtgctctgtg gcactgtagg gcgactagag ggtgtagtta acaatttact gtatattttc 180
 aaatagctag aagacaggat ttctaacttc cccaacacaa agaaatgata aatgtttgag 240
 gtgattaccc tgatttgatc attacacact gtatacctat atcagaatat cactactgtac 300
 cccataaata tatacaatta cctatcagtt ttaataaat aaattttcaa aaaccacaat 360
 atttttttga atgagactct acctaaaatt ttattatggt ctctctttat ggcttctttt 420
 tgggaaaaca ctcgag 436

<210> 802
 <211> 725
 <212> DNA
 <213> Homo sapiens

<400> 802
 gaattcgcgg ccgcgtcgac atgcacttta ggtttgtttt tgcacttctg atagtatctt 60
 tcaaccacga tgttctgggc aagaatttga aatacaggat ttatgaggaa cagaggggtg 120
 gatcagtaat tgcaagacta tcagaggatg tggctgatgt tttattgaag ctctcctaate 180
 ctctactgt tcgatttcga gccatgcaga ggggaaattc tcctctactt gtagtaaacg 240
 aggataatgg ggaaatcagc ataggggcta caattgaccg tgaacaactg tgccagaaaa 300
 acttgaactg ttccatagag ttgatgtga tcaactctacc cacagagcat ctgcagcttt 360
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 tcatacctat tgagatatct gagagtgcag cagttgggac tcgcattccc ctggacagtg 480
 catttgatcc agatgttggg gaaaattccc tccacacata ctgcctctct gccaatgatt 540
 tttttaatat cgaggttcgg accaggactg atggagccaa gtatgcagaa ctcatagtgg 600
 tcagagagtt agatcgggag ctgaagtcaa ggtacgagct tcagctcact gcctcagaca 660
 tgggagttacc tcagaggtct ggtctatcca tactaaaaat aagcatttca gactccaacc 720
 tcgag 725

<210> 803
 <211> 297
 <212> DNA
 <213> Homo sapiens

<400> 803
 gaattcgcgg ccgcgtcgac ttctaaaatt ttatataaat agaatcatat agtaagtact 60
 tctgttgccct ggctcttatt actcagagta attgttgata tttatccatg gtgaagcatg 120
 tgtcagagtt tattcctttt tattgctaag cagtgttcca ttgtgtatct gttttactac 180
 agtttgtcca ttcacctgtt ggtggaccct ggggtgtttc tgggtttggg ctctacacct 240
 agaagctcct atgaacattt gtgtacaagt tttggtattg ttaaagttaa actcgag 297

<210> 804
 <211> 701
 <212> DNA
 <213> Homo sapiens

<400> 804
 gaattcgcgg ccgcgtcgac aaaagggtta gtataagaaa atattgcaaa cacattaaaa 60
 cagttgtatg gtgcaggaaa agaagattgg aaaaagacca aaacacactt ctccagcaac 120
 actccatcag ctttttataaa ttttagagcta tctgctaatt ttttccctct tccttctcaa 180
 taaatgaaac aaacactggg cagctgcagg ttttcccaa tcagtgtctt ttatgtaaag 240
 acagtacat gcaaacactt ttagtttaca tccctcattc acagtgtaaa gcaggaaatg 300
 gtgtgggaga tgtgagacca ttctgaggtc agcgatagcc caaaggctct gcagtattcc 360
 ctccaatggc caaggattcc gtgtgtcatc tgcaggagtg agtaggcctg ctgtatttct 420
 tgtaactgct ggggtgttaca aaataagtta caatgtttta cactttaaaa aaaaaacaga 480
 aggaacattt gctttattgg ttacttacta gtttagcctc taggttatgg cacagcatgc 540

taaaaaatca tgtgttttaa agtaaatgtt ggtaaaatgc tggcatctgg tcctattgtg 600
 ttgatgcatt ttcacttctg tggcataggg aaatggactg gtctaaagag agtgaggcac 660
 aacacaagca gggcattagt ttgaatagga agtctctcga g 701

<210> 805
 <211> 269
 <212> DNA
 <213> Homo sapiens

<400> 805
 gaattcgagg ccgctgacgac ccaaccgtcg attgaattct agacctgcac tccagcctgg 60
 gcgacagaaac aagactccgt ctgaaaaaaa ataaaaataa atatatatag 120
 tgtagtatca aaggaaaaaca gcaaaacttt aaatatattg tttgaaaatt aactgttttg 180
 taggttaaga gcacagtgtc gcagcttttg acttaacata attaatcag atgttagcca 240
 tacatacctt ttccatctgc cttctcgag 269

<210> 806
 <211> 259
 <212> DNA
 <213> Homo sapiens

<400> 806
 gaattcgagg ccgctgacgac cgtcgattga attctagacc tgccctgagt gttgtgtggc 60
 catgggggat aggagggttg ctgttatcgg cctctgctcc tgtgggtttt actccttctt 120
 ggcctacctg ctgctctttc agtctccatt cccacctttt tctcctctc gcagccactg 180
 tttgatgctg gactgcagga aaatagtcag cgatgcagga gtgtccaggc agtgttccca 240
 ccaacagtac actctcgag 259

<210> 807
 <211> 216
 <212> DNA
 <213> Homo sapiens

<400> 807
 gaattcgagg ccgctgacgac ggacagggga ctgggcagaa aataatattg tagaaggtag 60
 aacagcattt ctttgggagg atttatcttt ttaagtatat agtgggtctt taccactatc 120
 ctacaacagg ttgcaggaca aataatgtat tttaatcttt gggggagtct ttgtgtaagt 180
 cagaccttat tcattttcat tccaacaacc ctcgag 216

<210> 808
 <211> 705
 <212> DNA
 <213> Homo sapiens

<400> 808
 gaattcgagg ccgctgacgac acctgcctct aaataaataa ataaataaat aaataaaaat 60
 aaaggcaaat ctgatcaagt catgctcttg gataaaagct ctaaaggctt caccctttgc 120
 tttaggagaa tgcttgcccc agcctggaag atccgggcct tccccctccc ccaagccctt 180
 ctctccctag cccaccttc cactgattc ctcccacaga tcaactgaga tataaatata 240
 actctccacc taaaaatatt acgggtagaa gtaacactga ggatggctag aaatggatat 300
 aagaaaactc attattgact aaaatgcaca aaagaatcaa atcttgacca cgaatctttt 360
 tttttggttt taatttaaat cttccaaaat ggaatggggg taccagtcac atcacacaat 420
 ggacagaaact cgtgtcaaga gctgcagcc cccacactga tggatgcctc caatctcagc 480
 agcagaatgt gtacggaatc gatgccgatg aaaacagttt cagtaaaatt acaaaagaat 540
 gaaaaacatg gacatttgtt taactgtact acaggggaaa aacaaaaatc tgatcaaaga 600
 attaatgttg atgaatagag ttcaagctgg agaacacctt cttaaaacat tttcagggtt 660
 agtatgtttt ggtttaaaat gtttgcattc aaggttctcc ctata 705

<210> 809
 <211> 230

<212> DNA

<213> Homo sapiens

<400> 809

```

gaattcgcgg ccgcgtcgac gtgagctaaa gcagtcaatt ttttcattgga gcaccacgaa 60
agaacaaaag acatataaat tatggttatg caaagtaaaa tataacaacat tttcttttct 120
ctcctttttt tttttttttt tttgagacag gtcttgctct gtcacccagg ctgcagtgc 180
gtgggtgggtgc catcactgct caacacagct tctatctccc aggactcgag 230

```

<210> 810

<211> 544

<212> DNA

<213> Homo sapiens

<400> 810

```

gaattcgcgg ccgcgtcgac cgctcgattga attctagacc agcccgccca acacagcgaa 60
accccgctct caccataaaa atacaaaaac cagtcaggcg tggcggcgcg cgcttgcaat 120
tgcaggcaact ccgcaggctg aggcgggaga atcaggcagg gaggttgag tgagccgaga 180
tggcagcagt atagtccagc ttcggctcgg catgagagg agactgtgga aagagaggga 240
gaggggagacc atggggagag ggagagggag agggagagg agaggaccgt ctgcttttaa 300
aatgggaaat atcagtattt gaggcaatga agtcaaaatt gacctaata gatgttgata 360
cgattctttt cctgaagctt taatacattt acatttttat ttttgaaaac tcactttcat 420
tctgtacatt tatactgtac ctattttgtg ttgtcagatg tacgtgtgtg agttactgat 480
tttcttcttc acacatggag acacttggca gccaatcagc ccaccaggaa ataggtccct 540
cgag 544

```

<210> 811

<211> 714

<212> DNA

<213> Homo sapiens

<400> 811

```

gaattcgcgg ccgcgtcgac cccaacctg cccgcatgcc ctatatctca gacaagcacc 60
ctcgacaaac cttggaagtg attaaccttc tgagaaagca ccgggagcta tgtgatgtgg 120
tgctagtgtg gggcgccaag aagatatatg cccatcgagt cttttgtgca gcctgtagtc 180
cctacttccg agctatgttt acaggagaat tggcagagag ccgtcagaca gaagtatgta 240
tccgagacat tgacgagagg gctatggaat tactgattga ctttgcgtat acctcccaga 300
taacagtaga agagggcaat gttcagaact cttctgccag ctgcttgctt cctccagctg 360
gcagaaatac aggaagcctg ctgtgaattc ttaaagagac aattagatcc ttctaactgc 420
ctgggcatcc gggcttttgc tgacacacat tcatgtcgtg agttgctaag gatagcagac 480
aagttcaccc aacataactt tcaagaggta atggagagtg aagagttcat gttgcttcca 540
gccaatcaac tcattgatat aatatccagt gatgagctaa acgttcgcag tgaagaacaa 600
gtgttcaatg cagtgatggc ctgggtcaaa tacagtattc aggaaagacg tctcaatta 660
ccccaggtgc tgcagcatgt tcgtttgcct ttgcttagtc ccaagccctc cgag 714

```

<210> 812

<211> 309

<212> DNA

<213> Homo sapiens

<400> 812

```

gaattcgcgg ccgcgtcgac acagaaaagg gcttggttgg acaaatttac aagggttgtt 60
aaacatacaa agtgccaaaa gcctatagtt attcattcta ttactgttg gcaggtaaat 120
atthttgtgga aagtatttgt ttatttttat tttactttt tgaggtggag tctcgccctg 180
ttgccaggc agcagtgcag tggcgcagtc tcggctcact acaacctctg cctcccgggc 240
ccgagtgatt ctcctgcttc agcctcccaa gtagctggga cttaaaggcat gcaccacat 300
cacctcgag 309

```

<210> 813

<211> 178

<212> DNA

<213> Homo sapiens

<400> 813

gaattcgcgg ccgcgtcgac gtcgattgaa ttctagacct gcctcgatga atcccgcac 60
 ctttccaaac acgtctcatt tattagttct aatatctttt agtagattcc ttagtggttt 120
 tttttgtttt ttgttttttt ttaataatat aaaggatcat gtcattctga aactcgag 178

<210> 814

<211> 342

<212> DNA

<213> Homo sapiens

<400> 814

gaattcgcgg ccgcgtcgac aaccttcttt tgtttctcag cagccaaggt gtttccagga 60
 agttcagaga gaacagaatt taagaagtgc aacatggcca ggggctgcct ctgctgcttg 120
 aagttacatga ttgttctctt caatttgata ttctggctct gtggctgtgg gctgctggga 180
 gtgggcatct ggctctccgt gtcccaaggc aactttgcca ccttctcccc cagcttccct 240
 tcgttgtctg cagccaacct ggtcatcgcc ataggcacca ttgtcatggt gacgggcttc 300
 ctgcgtcgcc tgggggcat caaggaaaac aagttctctg ag 342

<210> 815

<211> 668

<212> DNA

<213> Homo sapiens

<400> 815

gaattcgcgg ccgcgtcgac gtgtgccttt gctgttgaag agtccggaaa cttaatcaaa 60
 aatagatgtg aggggtctgc tgactgtac tgggtgtcta aactatacta gacgtggggc 120
 ttagaagagc tcccccttcc acatagaaaa gctctatggg gttggatcac tctctacaga 180
 ttcttctttt gaatcccatt ggctctccca gttgttctg acacccatag ccacagagaa 240
 ggagtcacaa agtgaagccc tcagcttgtc cttctctaag ctctctcgag cctcagtggc 300
 ctcatctgaa cagtgcagat gatagttacc acttcatagg gctgcctaga aaacaaaatc 360
 cagtgtgtt caaatcacct catagcacat cgtagatgct caagaaagt ggctggtgtt 420
 actcacattc tgctgcagcc cctaggctga ccccatctct gacagtcctc caacttgttc 480
 tctccctgct ccttgcctcc ttctctctag ggtttgcctga gagcagaggg agagaaaggg 540
 tgggtgttca gtcacccttg ctggctatga cagggttgcag tcatggtggg aaaggagaca 600
 gcatcactct taagcactct cctgagattc atgatggaca ctctccagc aacgcagggg 660
 ccctcgag 668

<210> 816

<211> 344

<212> DNA

<213> Homo sapiens

<400> 816

gaattcgcgg ccgcgtcgac ggcagatggt gtgaagaggc attgtgagct aagtgtatag 60
 gtgaggtgag ttaataaaag atgtaaattc tggcctaaaa tgggtaggcc tcatggatg 120
 caggaaaatt taattaagt gccaccactc ttcccccat caattggatt ttcttctgcc 180
 acagtaagaa gtcattccagg atatgctggg ggggcactta gatgagtctt ggctcgttga 240
 gtgttttcat tttctgatat tctaattgcc agcgaggaac cttgaacgta agaaaatcat 300
 gtgaaacttc atcaaaaatt aataatcacc aagcaggact cgag 344

<210> 817

<211> 163

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (135)

<400> 817

gaattcgcgg ccgcgtcgac gggggggcct ttattaatat tgtcacacca caccacacca 60
 cacacacaca ccacaccaca ccacaccgtt tgaagctgc atcaagctgt gcacaaacat 120
 gatcgagtg ctgtntttgt taagcctccg ccttcccctc gag 163

<210> 818

<211> 319

<212> DNA

<213> Homo sapiens

<400> 818

gaattcggcc aaagaggcct aaacaaggga tttgaacgtt tttcagcaca aaaggataac 60
 ttccgagtgg tggctctgtac gcatactagc aaaggtaatg gtgatctagc aaacaaaatt 120
 ggtttctgca gttagaagtg agcaggagca cttgtattat agtatttaaa taatcctggg 180
 taatctcttt ttaagccgag taacccctcc agattttgcc tttttattat tgaggctggc 240
 tttattttct tctacttttt ttcccgtttt atagcagtta attatttttg tgattattat 300
 gcaagaagca ttactcgag 319

<210> 819

<211> 393

<212> DNA

<213> Homo sapiens

<400> 819

gaattcggcc aaagaggcct acagagaact gaatagatga ggggtgttga aagaaacgtt 60
 tttgggcatg gtgtaaaggc atgcttgagg gattctaagg aggctgggtg gtggctggaa 120
 ctaagtgtgg ggatgagagg tactaggaga tcacatgaga ccatgtaggc cactgttagc 180
 agtgagtaca atggtaaatg agtagaagga ttttgaacag caagattgct atgatcttac 240
 ttaacactta taaaagagtc actcctatga cttttgtagg gtgagtaagc tatagtaata 300
 tcaatagaaa tgaacatgct ttgcatttgc catgtgtcag gtattattat tattatttat 360
 tttacttttt tttgagatag ggatccactc gag 393

<210> 820

<211> 270

<212> DNA

<213> Homo sapiens

<400> 820

gaattcgcgg ccgcgtcgac gaaggataag aacaggctcg agatgtccgc ccagagggtta 60
 atttctaaca gaacctccca gcaatcggca tctaattctg attacacctg ggaatatgaa 120
 tattatgaga ttggaccagt ttcccttgaa ggactgaagg ctcataaata ttccattgtg 180
 attggatttt ggggttggtct tgcagtcttc gtgattttta tgttttttgt gctgaccttg 240
 ctgaccaaga caggaacccc acacctcgag 270

<210> 821

<211> 163

<212> DNA

<213> Homo sapiens

<400> 821

gaattcgcgg ccgcgtcgac ctacatagtt ctttctgaat acaaattctca gataaaacac 60
 tatctcagtg atcaaccagg ttaagcaacc ttttagtgc ctcaattatt ccatttggaa 120
 aattgtaata atgatagtag taacctataa gattattctc gag 163

<210> 822

<211> 200

<212> DNA

<213> Homo sapiens

<400> 822

gaattcgcg cgcgctcgac attagaagct ctagtgagtg aagtttggtt atactttgaa 60
 aatatactaa gatggaacca ttaaaaacag taataatttt tattatcttt catttggtca 120
 agaatgataa aaagcatcaa ctagaaggga aacttcaaga tatcagatgt cgattgacca 180
 cccaaaggca agatctcgag 200

<210> 823

<211> 284

<212> DNA

<213> Homo sapiens

<400> 823

gaattcgcg cgcgctcgac ccaatacaca ccacactgtc tacttcagtg gggaaatacc 60
 aacctcctt caccaatcca gaaagaaatc tgtaatatga gattcctcga cagtgtagaa 120
 acctagtctt gtgtagtatg gttgttttgg acatttgtaa atttatcttt aaagtcttat 180
 ttgtatatat ctttttgaga caggattttg ccctgtcagc cagggtggag tgcagtgggc 240
 tgatcatggc ccactgcagc ctcaatcccc caggctatct cgag 284

<210> 824

<211> 275

<212> DNA

<213> Homo sapiens

<400> 824

gaattcgcg cgcgctcgac tattgtggta ctgtttataa tttattgggtg ctcttaggac 60
 cttagtggga gttggctact ttttgggtac acactaagta gctccagact gttttaaaaa 120
 tgcttggttc tgctgtatat aggtttttat ttatttggtt gtttttggtg ctgcttttgt 180
 ttcttccctt ggtgttgggt gacattttta actatcatag ataccctttt cttaaagcagt 240
 ttctatctcc tgggtccacc ccctccacc tcgag 275

<210> 825

<211> 256

<212> DNA

<213> Homo sapiens

<400> 825

gaattcgcg cgcgctcgac catctgggta tttggaaaca agtgggtcatt gttacattca 60
 tctgtgaac ttaacaaaac tgttcacctt gaaacaggca cagggtgatgc attctcctgc 120
 tggtgtcttc cagtgtcttc tttccaatat agatgtgggc atgtttgact tgtacagaat 180
 gttaatcata cagagaatcc ttgatggaat tatatatgtg tgttttactt ttgaatgtta 240
 caaaagggaat ctcgag 256

<210> 826

<211> 276

<212> DNA

<213> Homo sapiens

<400> 826

gaattcgcg cgcgctcgac agagcttaaa ggctggatta tgcaaatact aacttttttt 60
 attttagtga aaacgattca aatttcaaca catttaataa taaatgagaa aatttcagta 120
 gataagcata gaacaaatgt aaaagaaact ctcttcaacc aagattgtac tattgtatgt 180
 ggtctaaagt atagtaatat ttttactcag aatgggtgaat taaagatact gggagcttct 240
 gaaatgcac ctattccaaa aatgggggta ctcgag 276

<210> 827

<211> 169

<212> DNA

<213> Homo sapiens

<400> 827

gtccttgtgc tgaggagaag gatgtttatt ctgatatcca ttagatgaaa tgttctgtaa 60
 atatctatta ggtccatttg ttgtacagta cagattaagt ttgatgttcc tttttgattt 120
 tctgttattg gaagatctat ccaatgctga aagtggggcg agtctcgag 169

<210> 828
 <211> 172
 <212> DNA
 <213> Homo sapiens

<400> 828
 gaattcgcgg ccgcgctcgac catcaagtct acaagaaaat taaaggagtc ttgattaac 60
 agtgggtttt caaacaacc ttgtgtacaa ctgagtaagg aaaaagttca gaaaaaaagc 120
 tacagaaaac tgaagactac ctttggttaat gttacttctg aatgcgctcg ag 172

<210> 829
 <211> 385
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (251)

<220>
 <221> unsure
 <222> (264)

<220>
 <221> unsure
 <222> (274)

<400> 829
 gaattcgcgg ccgcgctcgac gctgctctga tgacttttaa aaactgattt gtagggattc 60
 tttgtgtaaa cactaatgct tgatctgata tatcaaattg tgtgaatgct taacagacca 120
 agcattagta ttcacacatt catgtgcatg tgtacatgtg tgtgtgtgtg tagtatctta 180
 tgcattctac cctagaggat gccactcacg taactttatt tttattatgt atataataat 240
 caggggtacac natatctgtt tttntgaaaa gctnactaat acagcagaat ctatctactt 300
 tcatttcctt agtttgaagg tgagtataca aaattcacia tctctacttt gaataatctt 360
 gaaataaaaac atgagattac tcgag 385

<210> 830
 <211> 246
 <212> DNA
 <213> Homo sapiens

<400> 830
 gaattcgcgg ccgcgctcgac tatcttaaac tcttgaaata gatattctaa acaatttaaa 60
 attaaccttg ataacaaaca gttccccaat cagcactggc cattggacca tacttgaggt 120
 tacattgctg tagtgtgaga ctttcatact ttttttaaaa ttgtcacctg tattaagaaa 180
 tacattttac attttcatcc agtgttatat catatacaca tgtacataac tgaaacaata 240
 ctcgag 246

<210> 831
 <211> 323
 <212> DNA
 <213> Homo sapiens

<400> 831
 gaattcgcgg ccgcgctcgac ctcccttgct catTTTTTaaa ttggattatt tgtctTTTaaa 60
 ttttagatac taatccctta tcagatatct gatttgcaaa catttttctt tctttgtagg 120

ttgccttttt attttgttgt ttgtttcctt tgccacgctg aagcttttta gtttgagcta 180
gtctcattta tttttacctt tgtagctaag ctttttgtgt attacccaaa aaatcattgc 240
caacaccaat gttgaggaac tttcctccta tgttctcttc tagtttatgg ttttgggtct 300
tatatttagg tcattcactc gag 323

<210> 832
<211> 343
<212> DNA
<213> Homo sapiens

<400> 832
gaattcgcgg ccgcgctcgac gggagtcata tacagacttt tgtggatttc atgttaaaaa 60
aaaaaaatca attgttataa gagaacacac tgttttgtaa aaaaaaaaaa tcttttttgt 120
tgtgcatatg tatttacaca catatatcca tgtgtactcg gtctcaatat caaaatattt 180
cttacagtta cttatgggtca aactgtttga aatacttgta ttttaatttt ctggtgtggc 240
ttttcagaca ctctggaaaag cagaactaag aaatgatttc tggggatatat ctaggaaatg 300
tcacctcagt tatagcccag aaacaactgt ggcccgactc gag 343

<210> 833
<211> 383
<212> DNA
<213> Homo sapiens

<400> 833
gaattcgcgg ccgcgctcgac cttttaaaac gttgtccgca tttgtactca gtgggacaca 60
tcttagggcc tgcgttatcc tgcaaagtat agaatactgg aatcagaagg aagctttctt 120
ttccccctac tgtttagtct ttttgggagg aaaaagaccg gaaattttgtg gtcatttaga 180
tgttcattaa cctggctcgca ttcacacta gtccatttca gctccgagga tgtttaattt 240
cagtcctctt ccaggtttgc atgcttcagt cctcttctgg gtttgcattc ttcagagggt 300
ctcggcactc agtctcccta gaactgtctt ctcccaaact ttcctaact cttcttccgg 360
gtcctatccc cccttccctc gag 383

<210> 834
<211> 191
<212> DNA
<213> Homo sapiens

<400> 834
gaattcgcgg ccgcgctcgac ctcagaagga gaatgttgtt gcttgagcct cttttgagct 60
ttaaaaagga caaggaaagg cactgtacgg agtgttttac ttttgacttt tttttcatga 120
ctacaaaactg ttggatattg aaaaccttgc atttacttgt gaattgccag tctgtgtttg 180
cgtcactcga g 191

<210> 835
<211> 194
<212> DNA
<213> Homo sapiens

<400> 835
gaattcgcgg ccgcgctcgac tgcatttca tttcggtttc ttttctcgcc atgtttttct 60
gtcggaaatta cggttcgttt tggttctatg tactctctaa aatgttatcg tttttcattt 120
gtctactaat tttcgtgcat ttgttactac tgagtttctt aatatctgac tggcctccgc 180
ccacgggtct cgag 194

<210> 836
<211> 206
<212> DNA
<213> Homo sapiens

<400> 836

gaattcgcg cgcgctcgac gtttgagtct tctgatgtaa aacattttaa cagggaaatt 60
 tctgctgtcc tcagaacaag atctgtattt ctgcctcttc cctaccacc cctcttccac 120
 acctcataat gttatttatt ttttttctct ttagtgggca gttttatctg gcaatagcaa 180
 ctcaatttta tggcaacgag ctcgag 206

<210> 837
 <211> 156
 <212> DNA
 <213> Homo sapiens

<400> 837
 gaattcgcg cgcgctcgac tgtgctgta tgtatgtgtg tgtgtgtaga cgttgtcctg 60
 aggttcatca gctaaaataa tataataagc aatccctaca aaatatttca aaccaggcaa 120
 atgacttctg gaagagagag aaaggaagag ctcgag 156

<210> 838
 <211> 282
 <212> DNA
 <213> Homo sapiens

<400> 838
 gaattcgcg cgcgctcgac gcatttgatt ggtcagagtg gttttagaat gctttttgaa 60
 ggaaaataaa aatggacaag atattgaaga atagggggaa tttggccatg agtagaagac 120
 aggagacttt tactgaaact cactccttca acctgttttt cttttattgt cgtacttggt 180
 accatgtctt tatggcttgc tgtccttatt tcaactgtatg ctcactctaa tcttttagga 240
 aattgcaaaa ttattaaaaa ttgccatagt acaaacctcg ag 282

<210> 839
 <211> 199
 <212> DNA
 <213> Homo sapiens

<400> 839
 gaattcgcg cgcgctcgac gcaaaacatc catcttatcc gagccctct tgcaggcaaa 60
 gggaacaacag tggagagaa aatgggtacag cagttacaag aggatgtgga catggaagat 120
 gctctttaa aatctctgta accatttctt ttatgtacat ttgaaaatgc cttttggata 180
 cttggaactg cgactcgag 199

<210> 840
 <211> 146
 <212> DNA
 <213> Homo sapiens

<400> 840
 gaattcgcg cgcgctcgac ctaaacctgc gattgaattc catgccctg tctctctgtc 60
 tttatgtgtt gccatttctc tgcccctgcc ttggtctctc tttctcagag tgtctcttga 120
 tctctaactc ttctctttgt ctcgag 146

<210> 841
 <211> 225
 <212> DNA
 <213> Homo sapiens

<400> 841
 gaattcgcg cgcgctcgac caccctaatt atccggctgc ggcacaacgt gattaagaca 60
 ggtgtacgca tgatcagcct ctctattcc cgaatctcct tggctgacat cgcccagaag 120
 ctgcagtgg atagcccca agatgcagag ttcattgttg ccaaggccat ccgggatggg 180
 gtcattgagg ccagcatcaa ccacgagaag ggctatgtcc tcgag 225

<210> 842

<211> 280
 <212> DNA
 <213> Homo sapiens

<400> 842
 gaattcgcg cgcgctcgac cctaaacctc gactacatat tctgaaccag ccaggggaagg 60
 gtgagttagt tgtttctgtt ggtcaactga atctcaggta tctttgggtct tcttttctct 120
 tacaatggaa gtaatgttca ggacctatct gagaccagtc ccttgtctac tgctcttcat 180
 ccttttttct cttgttttct caatggcttt actccttctc ctcttcaaca gcatcagctc 240
 tgccccctct tactcttttg caaagacacc caatctcgag 280

<210> 843
 <211> 361
 <212> DNA
 <213> Homo sapiens

<400> 843
 gaattcgcg cgcgctcgac agcttttctc tctacttgca gggtcaccaa agtgaaaatt 60
 gagtggtcat ttttttctta ttgctgatac ctgtagcctg agaatgttac ttctagcagt 120
 tgtcttcatt ttgtttatct ttattaatgt agaaaattat caaaccata gaaaaattga 180
 gagtagagtg aatacccata tgccccctgtc cttgggtctc cagctattaa caccttgta 240
 tatttcttat cctccttctc ctctcttact ctttcttctc tctctctctt tcttctctg 300
 tctcttctct tttgtcagac catgtgacac ttcaccaaca tataacactt cactcctcga 360
 g 361

<210> 844
 <211> 121
 <212> DNA
 <213> Homo sapiens

<400> 844
 gaattcgcg cgcgctcgac gggagacaaa gaaatatcga aagcaagtaa agaaaaaaaa 60
 agacaccagt gatcaacaga ataaagccag aatgagattg aagttagaaa cttggctcga 120
 g 121

<210> 845
 <211> 366
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (69)

<220>
 <221> unsure
 <222> (75)..(76)

<220>
 <221> unsure
 <222> (97)

<400> 845
 gaattcgcg cgcgctcgac ctgggaacat ggtcaagggtg gaaggggctc ccctagagag 60
 ggtgggggng tagtnncttc ccagttggcc agaaaanagg gccttgacaga ccccttagc 120
 atttttctcc ttttttctc tccctgctct ctacttcttt ggggagcccc ttgtgttttg 180
 gagtctgact ggagtctcgc atcctggggc ctgctccatc catcctctct gggcgccaga 240
 cctccatcc aagccctgtg tctttccata gtcagggtca ggccttgcac ctattccaag 300
 gggcactcag tacacattcc ataaattagc tgggtgtccc tgcacgcccc ccccatgaaa 360
 ctcgag 366

<210> 846
<211> 183
<212> DNA
<213> Homo sapiens

<400> 846
gaattcgcg cgcgctcgac tgggtctttt atagctaata aatatecttt tatctggctt 60
taagattttc tctaataact ggttttaagc aatttggtta tgagggtgctt tgatgtagtt 120
ttatgtttct ttttattatt attattaaat ggtgtctcac tctgttgccc aggettactc 180
gag 183

<210> 847
<211> 191
<212> DNA
<213> Homo sapiens

<400> 847
gaattcgcg cgcgctcgac atcctgggtc ttgcctgtaa tatcaatcaa ttgtttcacc 60
ttctcctcaa agtcagcacc attatgttcc gaaatcatct gtgcaagtct aatttggtct 120
gcagtggtct gtggcgcgtg cttgtgctgt gtctggtttt ggttttgagg ttgttcccag 180
ttccccctga g 191

<210> 848
<211> 207
<212> DNA
<213> Homo sapiens

<400> 848
gaattcgcg cgcgctcgac gtcacctcaa gcatttatcc tttgtgttac aaacaatcca 60
gttatacttt tttagttttc ttaaatgtac gattaaatga ttattgacta tagtaaccct 120
gttgtgctat caaaaatatt agggcttatt cattatttca ttcaattttt ttggtaccca 180
ttaatcatcc ctacccccctc cctcgag 207

<210> 849
<211> 235
<212> DNA
<213> Homo sapiens

<400> 849
gaattcgcg cgcgctcgac ggaattatct agtccccaga ttgatcatct cccctggcaa 60
cgtgactctg ttttttgtgt gtgtttccat gctgactagt cccctactgt taatatcact 120
actaattagg ctataaccag gtctttcctg gcctgagaaa tattctctta aaatgacctt 180
tgttttaatc tcattcatga tgttgatttt ttttcaatgt ggtgctgggc tcgag 235

<210> 850
<211> 205
<212> DNA
<213> Homo sapiens

<400> 850
gaattcgcg cgcgctcgac cctaaaccgt cgcttgaatc ttaaaaactt ttatattcct 60
tgttcataat tgatctgaca gataacagtt tgttaaaata ataatagtga ccatgtatct 120
gattatgctt ctgtgggttt gtatatgtgt gtgtatctat acatgggtact taggtataag 180
tgaaatgaat gacagcgatc tcgag 205

<210> 851
<211> 221
<212> DNA
<213> Homo sapiens

<400> 851

gaattcgcg cgcgctcgac cgcagacccc acactcttct gcaattcatt tcatagttgt 60
 caagactata caaattgtcc tttttaatgt tctctcttct gctatcccta gttggcagtc 120
 ttctcttcta caacctgctg aaagtggaag acctccagtt ttcctttaat tcttcagcaa 180
 accaccaact attatatgtc ttttttccag aacaactcga g 221

<210> 852

<211> 254

<212> DNA

<213> Homo sapiens

<400> 852

gaattcgcg cgcgctcgac ctaacaatga agagtcaaga aaaagctaatt ttaggagaaa 60
 atattgagaa gtcttctgca agcaaggaag aagtcaaaga agtcagtatt gaagatacag 120
 gtgttgatgt agatccagaa aaactggaaa tggagagtaa acttcataga aatttgctat 180
 ttcaagattg tgaaaaagag caagacaaca aaacaaaaga tccaacccat gatgttaaaa 240
 cccccacact cgag 254

<210> 853

<211> 247

<212> DNA

<213> Homo sapiens

<400> 853

gaattcgcg cgcgctcgac gtcatttgac aacatccctg gcttttggtt gtttctttct 60
 gggtagagac aaatttactt tccatttctg ataacaacgg agtcagtctt ccctgctgcc 120
 gaggattttt tgaaacagcg tgaatactgc tcttcgcat ttctgagaga gggcagaacc 180
 ggggtcatcgt gttgcttgac agagggccat gataactgtc tacagatatt taaaggggtgt 240
 actcgag 247

<210> 854

<211> 253

<212> DNA

<213> Homo sapiens

<400> 854

gaattcgcg cgcgctcgac aattagtgtg catcattaaa ttatcaaata agtataaatt 60
 agtactcttc tttttctgga taatagaagg atcttagaac actttaattc catttatctc 120
 cctcacagtt tttatgctat attgccatct acttacattc ttggtaaaatt ttaaacttca 180
 gaagacatta ttattattgt tgtttgaaca gttaatatatt attgagagtt actcatatat 240
 ttgccacctc gag 253

<210> 855

<211> 318

<212> DNA

<213> Homo sapiens

<400> 855

gaattcgcg cgcgctcgac acctgcctcg agcctaggct gctccttttc acctaatata 60
 cccagtttat aaatgggact cagttataaa gtttaggtcc acctcctcca ggaaattttt 120
 tcttgacacc tcttcctcc caatctcgtt tgggtactct agcattgtgc ttccaccctt 180
 tgcacagagc aatcatcatg tttaccacat ctactattaa cataattgtt tctgtgtttt 240
 tctctccac aagattttatt ttttttagat gaggtgttgc tgtgttgccc aagctggact 300
 tgaaccccta ggctcgag 318

<210> 856

<211> 249

<212> DNA

<213> Homo sapiens

<400> 856

gaattcgcg cgcgctcgac aggtttcagc ttcttcctga ttcaatcttg ggtgggtgta 60
 tgtttccagg aattcatcca ttttttaaat ttttttttag ctttttttagt ttgtgtgcat 120
 agaggtgttc ataacagtat ctgaaggctt ttttgtatta ttgtggagtc agtggtaatg 180
 tcttctttgt catttctgat tggatttatt tggatctact ctcatttttt ctttattagt 240
 ccgctcgag 249

<210> 857

<211> 212

<212> DNA

<213> Homo sapiens

<400> 857

gaattcgcg cgcgctcgac aggtttccaa tcaatataaa tatatatata tatatacaca 60
 cacatatata aaaagtataa tttttctatt ttgttttttg gttttaattt gcagagattt 120
 gctgccagga atcaattttg aggggttcaga tttagcttgg aagaaaaaaa agaaacatac 180
 atccttcagt ataggagatg agggcactcg ag 212

<210> 858

<211> 426

<212> DNA

<213> Homo sapiens

<400> 858

gaattcgcg cgcgctcgac caaaaaacaa aaaaagaaaa tcttagaaaa agaaaataaa 60
 ttgtaatat tcagaatatt tgttggggag gatattgttg ctcaagaaat acatactgag 120
 aacttaccat tgatgctaga gattgaattt ccccatgtct acatgaaaaa tgaatagaat 180
 ataaacattt taaattgagc catgtctatc tgtattatat ttcttttata gaaattcatg 240
 gaaatggat attttaactg aattattaac actggggaca ataggcttta atcattatct 300
 aatacctgta cgttgttttg aaattcatag ccaccacca ttaatttcaa aattgggttc 360
 ttactcaaag agtgatgaaa aggcaccagt accaaatggt ctggccaaaa tgctacatgc 420
 ctcgag 426

<210> 859

<211> 215

<212> DNA

<213> Homo sapiens

<400> 859

gaattcgcg cgcgctcgac catttgacct tttacaaat ccctaagtaa ataaatagcc 60
 cctcaggaaa actaagtttt tctctgctgt ttttttgctt gagagagcta taactgtaat 120
 agacttatat tcttgaacat tttagtgcct gccaatattt ggtaatatatt atgtttccta 180
 tatttgtaat gaacattctt cttccggtac tcgag 215

<210> 860

<211> 672

<212> DNA

<213> Homo sapiens

<400> 860

gaattcgcg cgcgctcgac ccagcctcc cttcccacag aggccacgt catggccagt 60
 tgctgcagtt tctttccaga gaacctgtgt atgtgtaag ctgtacaggc gtgggtacac 120
 cacacagcct gtcttgact gtggactgtt gagttactag tacatctaga atttctcttg 180
 ctattccagg ctgcatgttt accttaacct tccctgtgat gtcttcatgc cgttgtcttc 240
 ttatgcaaga ataagactca aatgactcca gaaagctaca cttcctgttg tgagtatatg 300
 atatccattt cctacatag ccactaaca cagggttttta caattttatt tatttcttgc 360
 tactttaaga aatttttgtg gtgaaatata tataatagaa gttgactatc tgaatcattt 420
 ttaagtatac attcagtagt gttaagtatg tcgccattgt tgtacaacca atctccagaa 480
 ctttttcatc ttgcaaaaca aactctgtac ccattaaata acattaaaca ttccattccc 540
 tccagcctca gcaaccccat tctactttct gtttctgtga gtttgactat tccaagcact 600

tcatatcagt taaatcatga agtatttgtc tgtctgtgac tggcttattt ctctgagcac 660
agtgtcctcg ag 672

<210> 861
<211> 207
<212> DNA
<213> Homo sapiens

<400> 861
gaattcgagg cgcgctcgac ctacaagttt ggacttggtt ctggaatctg cctacttggt 60
caaaatatta atagcatatg atattataaa ttaatgatta gttttatgta ttgcagaaaa 120
tatttaatta tgctgatttt tcctaataata tttttatggt tacaatttga cttagtaaag 180
gatgaaaaca aagtagcaaa actcgag 207

<210> 862
<211> 171
<212> DNA
<213> Homo sapiens

<400> 862
gaattcgagg cgcgctcgac taaacacatt atgatttttag taagacatat gcattattta 60
gacatgtact tcttaatat aaagatagta ttgttaattg gttttgacct tattcagact 120
atggtttagag tacatactaa gcaagaatta aaggctttcc attttctcga g 171

<210> 863
<211> 235
<212> DNA
<213> Homo sapiens

<400> 863
gaattcgagg cgcgctcgac gtgttttcag aaagagaaaa catctcctgc aaagatctgt 60
agggttcacc ttgaaagaac aagacaaaac caaacttcaa gactatcctc ctgtttaaaa 120
ggagactagc aggtgtcaaa gagaggcggg aaagctcatg atacctgatg taatcagtgc 180
cctctcctc ctggccgcag caggatgcct tcccttcaat gactcccaac tcgag 235

<210> 864
<211> 256
<212> DNA
<213> Homo sapiens

<400> 864
gaattcgagg cgcgctcgac tagaatcgtg gatccccatg gccctccttt gtcacatttt 60
tctttttact gttctcttac cccctttcac tctcacttca ctctctccat gctgctgtac 120
taccagtagc tcctcttacc aagaggttct atggagaatg tggcttccca gaaatattga 180
tgtcccatcg tatagggtt tttctaaagg agaccccaact ttcaccaccc acaaccatat 240
accccgaca ctcgag 256

<210> 865
<211> 265
<212> DNA
<213> Homo sapiens

<400> 865
gaattcgagg cgcgctcgac aattgacacg tcacactctg gtcagaaggt gtttaagtagt 60
tcctgttatt caaggaatga agtacaacca ctttagccca gtgctcaagg ttatactttc 120
cttactctgt accaattctc tagtctcacc atcgagggt gccctgcggc ctcagacca 180
tcacatgcat tcctgcctca gcgtctcct tctgtgcaac acctgtcct ctcctggcac 240
taaccaaagt tcaccattcc tcgag 265

<210> 866

<211> 262

<212> DNA

<213> Homo sapiens

<400> 866

gaattcgcg cgcgctcgac cattttcttt ggctgttatg tgtaaacagt tctctgtta 60
ctttgcatgt tatgttttat ttttctcttg cttgacaact tgtgccagag aaacattttt 120
ctaccccttt ttgtctactc ttccaacctg tcaaactggt gaattttcct tctcttttca 180
tagtctctgc atttctaata atgttcacta tagttcagtg ctgcccaata gaactttctg 240
ctgcggggcg ggggtgctcg ag 262

<210> 867

<211> 283

<212> DNA

<213> Homo sapiens

<400> 867

gaattcgcg cgcgctcgac atctacttct agcttttttc ctattttggc tccggcggtt 60
ggttcctatc ttccccgcac tgcccgcgct cacagtcttg cttccttgtc ttttgctca 120
tatcgtcagg tagctagttt cggttcagct gctcctccca gacagtttga tgcattctca 180
ttcagccaag gccctgtgcc tggcacttgt gctgactgga tcccacagtc ggcgtcttgt 240
cccacaggac ctccccagaa ccacacttct gcaccggctc gag 283

<210> 868

<211> 219

<212> DNA

<213> Homo sapiens

<400> 868

gaattcgcg cgcgctcgac aaaacgtcag aacatttggg gttttaaact gatttggtgc 60
tccctatcca gcctagacac cagtaactct tgtgttcacc aggaccaga cccttgcaa 120
gggataggct cgttggtgac attgtgaatt tcagatttgt tttatccact ttttttgcta 180
tttatttaaa tggtcgatca acttcccaca acactcgag 219

<210> 869

<211> 258

<212> DNA

<213> Homo sapiens

<400> 869

gaattcgcg cgcgctcgac gtaatacaga agggagtagg taataaatc tgtaattctg 60
aaaaagtatt agtataaact ttaattagta tttcatcttt aaatgtttt ctggctctgt 120
ccactgaaga agcttagaaa taatgaccaa atctgttaca tccataccat tgtgatctta 180
aaatatcttt ttctactaga agaaatggct gggtgcagaa attgcttatt ccccatggg 240
caggaagtgc acctcgag 258

<210> 870

<211> 298

<212> DNA

<213> Homo sapiens

<400> 870

gaattcgcg cgcgctcgac ctgcatttta aatatattgg ggacagattg cgctgagacc 60
tggttatgag caagccaatc ttttgaatct agagaatgga attcttaggt ttatatttct 120
gttaagaaat actataaata tgactcttat gagaagactt tgttgctctg tagtgtttct 180
gaatactgta tttgttggat tgatcaaggc tatttttcaa aaagctctct gcttctgtt 240
tgtttggttg tttgtttttg agacagagtc ttgctctgct gccggggctg aactcgag 298

<210> 871

<211> 150

<212> DNA

<213> Homo sapiens

<400> 871

gaattcgcgg ccgcgtcgac cgtccctctc tctgacagaa gccatataag gtccatgagg 60
 gtagagattt tcttttttct ttgtgttaat tgctgtatcc tcagcacttg gaaaaagggc 120
 ctggcacttt gggatgagcg aacactcgag 150

<210> 872

<211> 241

<212> DNA

<213> Homo sapiens

<400> 872

gaattcgcgg ccgcgtcgac attgaattct agacctgcct ctagtgtgtg ggtgtgtttg 60
 tctttttgtc ttccatcttt tggtttacat ttaaatcacc tcaaaaaata tccccctgcat 120
 gtatcattca gcttctcaga gtttttgtgt ttttgtctgt gtatgtgtgt gtgtgtgtgt 180
 gtgtgtgtgt gtgtgtttta aaacattttt tccttttgtt aggccacatg ctacactcga 240
 g 241

<210> 873

<211> 228

<212> DNA

<213> Homo sapiens

<400> 873

gaattcgcgg ccgcgtcgac catgtctccg tccctgtcac ggggtggttct tttcctcttc 60
 ctctccctca gaagtctgcc catcctacaa ggagatgtgc aggacctcc accccgaaca 120
 ggtaactcgg tgccttcac ctccatcac cagcctgacc ctgtgagccc ctctgtgtct 180
 tgtggaccgg tcacctgag ctctcagtt gctgaaccac ccctcgag 228

<210> 874

<211> 178

<212> DNA

<213> Homo sapiens

<400> 874

gaattcgcgg ccgcgtcgac atattaactc aaaagaaata gggtgatttt taaaggatta 60
 ataaaattct gaaatgttaa gtagaagatt acattgtcta gtcttgattt tcctccttct 120
 gttgtctctt ttcattcaca cactctcagt ttctcatatt thtagctcat tgctcgag 178

<210> 875

<211> 179

<212> DNA

<213> Homo sapiens

<400> 875

gaattcgcgg ccgcgtcgac agtggctccg caggatatat ctgatttaaa aaataggaac 60
 cacaataata atagctgctt atgcttatgg agcattgcc a tgtgctagat aggcaccatc 120
 ctccagccctt ggcaggctcg agctccttta tttcttccaa tcaacactgt cagctcgag 179

<210> 876

<211> 214

<212> DNA

<213> Homo sapiens

<400> 876

gaattcgcgg ccgcgtcgac caagatttta ccaaggccaa ttttagtagc tttgtttctg 60
 ggtgattttt tctggtcaat atacagaaat aagaatgata atgaaagtga taatgatagg 120
 aataataata ggaagagtag tgactttttg tctttgtgta tcaattcatt caacaaattt 180

gaccaagtgc ctgctacatg ccaaagcact cgag

214

<210> 877

<211> 436

<212> DNA

<213> Homo sapiens

<400> 877

```

gaattcgcg cgcgctcgac gtgcatgtcc caacaactca tctcaaatac taaattcaaa 60
agaaaaactg tagttctcct cagcattagc actaatttat ggtaacaatc atttctttta 120
aatgtctaac ttatttaacc ccttcatttc aaactgcaaa ttaaagcatg tatttacata 180
tttatataca aaaaacttca aaaacaaatt aatccaaatc ttgggtccaag agtttccact 240
ttataagtgg tatgggtacta tgctatatat atcctcttcc aaaagtctct taggacttgg 300
taagttccaa atattcatte acaaatgggt cccctttaag cttaatgaac catatacttc 360
atttctgagt aaattagagg aaatattaca gaacacgctt tgtacaatac agcaccacta 420
ctgagaaggg ctcgag                                     436

```

<210> 878

<211> 174

<212> DNA

<213> Homo sapiens

<400> 878

```

gaattcgcg cgcgctcgac cttatttatt actgaaataa tctaaactga ataaataact 60
ttttaaaaaa ttacattggc cagtattagg ttcttgatgc gtatttgggt ttttgttgt 120
actgctgggt ttttctctc cagtattgga tgcgttaacg gggatgcact cgag 174

```

<210> 879

<211> 229

<212> DNA

<213> Homo sapiens

<400> 879

```

gaattcgcg cgcgctcgac ctcagaaaaa aaaacaaaca aacatgttgg tcaaatttat 60
aattaaaagc acaatagtta ttgggtgttt attgaataaa atcaggagtt ttaataatat 120
tggtgtgtgg caccttgatg gatgggacca cagtatgaag gctgtagtaa tccagcatga 180
ggtgcccttt attttctttt tcagattcaa gagcaggcac gacctcgag 229

```

<210> 880

<211> 110

<212> DNA

<213> Homo sapiens

<400> 880

```

gaattcgcg cgcgctcgac atttatctga tcttttacag aaaaagtttg ctaacccttg 60
ataacagata ctctaaaatg caggtttttc ttcttcaatt ggtgctcgag 110

```

<210> 881

<211> 239

<212> DNA

<213> Homo sapiens

<400> 881

```

gaattcgcg cgcgctcgac gtgacttggt taactgcac ttttggccag tagttagtct 60
tttctgttgg ggacaccatg ttggtagttt ggaaatgggt tcttccatcc attgcctgcc 120
ttttagcttt gtcgatgggt ttctgttgta aattttgggt caggtttaat gtgaacaatg 180
gttatgagac gagtgccatg agttcctgtg tgctgtcac ccagcccgcc acgctcgag 239

```

<210> 882

<211> 159

<212> DNA

<213> Homo sapiens

<400> 882

```

gaattcgcg cgcgctcgac ctgtgtggat ggactgagcc tagctaagtc ctgattcatt 60
ttgacttgag ttctctcagt gggaagaatg ggaaagattt acagcttcgt cctggtcgcc 120
attgctctga tgatgggaag ggaaggttgg gccctcgag                               159

```

<210> 883

<211> 121

<212> DNA

<213> Homo sapiens

<400> 883

```

gaattcgcg cgcgctcgac ggggtctctt gcttttgttc ctctaaaaac tggctctgta 60
actttttaat attttcttca tgctgtgctc tcaattcctt catctgctgt ccacactcga 120
g                                                                                   121

```

<210> 884

<211> 257

<212> DNA

<213> Homo sapiens

<400> 884

```

gaattcgcg cgcgctcgac cctagcttga atttgaaaca acagcacatc ttaatttga 60
cactaaaattt tcatcaaaaa tatttcattg atttagattt cataaattta cagttgaaaa 120
agtagatgta catatccaaa ttgtcccaaa catgcttaaa atttttccag tatgtatgtt 180
gttttaaaat atttatattt ttgttgttgt tggtgttgtt ttttaagatg gatttttgtc 240
cttgtcaccc cctcgag                                                             257

```

<210> 885

<211> 141

<212> DNA

<213> Homo sapiens

<400> 885

```

gaattcgcg cgcgctcgac gtctctctct gagctctatt tgcttcagt caacatgaag 60
ttcatgacct agtcgcctt tgagagggca ctccgatcc tcaacgtggc cctcgcatcc 120
ctccacccca gacaactcga g                                                             141

```

<210> 886

<211> 286

<212> DNA

<213> Homo sapiens

<400> 886

```

gaattcgcg cgcgctcgac gcaacatgag gcttttcttg tggaacgcgg tcttgactct 60
gttcgtcact tctttgattg gggctttgat ccctgaacca gaagtgaata ttgaagtctt 120
ccagaagcca ttcactctgc atcgcaagac caaaggaggg gatttgatgt tgggccacta 180
tgaaggctac ttagaaaagg acggctcctt atttcaactcc actcacaac ataacaatgg 240
tcagcccatc tgggtttacc tgggcatect ggaggctcgg ctcgag                               286

```

<210> 887

<211> 264

<212> DNA

<213> Homo sapiens

<400> 887

```

gaattcgcg cgcgctcgac ggatcagaaa tattgcttgg aaagtgctga gctcatgatg 60
gatgctcaac aagcggtagt tatgataatg gcagggaacg cggtggggtt gcttgtcttg 120

```

ttttctgcgt gttttggcgg tctgcaaggg gagagcagcc agcaggcagg gcacctgtgt 180
 acgtcgatga ctgaccaccc catggtaccc cagatctatc tccccaaaac actattcttt 240
 ctgcctggga cccattctct cgag 264

<210> 888
 <211> 290
 <212> DNA
 <213> Homo sapiens

<400> 888
 gaattcggcc aaagaggcct atgaagcagg cgctcttggc tcggcgcggc ccgctgcaat 60
 ccgtggagga acgcgccgcc gagccaccat catgcctggg cacttacagg aaggcttcgg 120
 ctgcgtgggc accaaccgat tcgaccagtt atttgacgac gaatcggacc ccttcgaggt 180
 gctgaaggca gcagagaaca agaaaaaga agccggcggg ggcgcggttg ggggccctgg 240
 ggccaagagc gcagctcagg ccgcggccca gaccaactcc aggcctcgag 290

<210> 889
 <211> 243
 <212> DNA
 <213> Homo sapiens

<400> 889
 gaattcggcc aaagaggcct agctaccaat tcttctactc ttcgtgctgt ttcttctctg 60
 atgagttttt cttctatttc ttgctgtcga attttctgct gccgctcgaa ctccgctttc 120
 ttctctctct cctctcgtct ctgcttctcg tccaggctgc tgcgcttgct cctcacgttt 180
 tgcacgttct tctctctctc tagctttttg tgcggaagc tcagcttgct tctgtcgtc 240
 gag 243

<210> 890
 <211> 241
 <212> DNA
 <213> Homo sapiens

<400> 890
 gaattcggcc aaagaggcct aagctgggtgt cattacacgt caacctgcct tgagccaagt 60
 cctgctttcac ctgcagcgcg aacaggatcc ttgtgagttc ttcttggagt tgtgtgtggt 120
 caggcggaagaa gaatttcacc acaaaactta caacaacgtg ctttggcctt ctaactctgt 180
 tcacaatggg ttttaggaga tccagccaca ccgtgatctt tttgtgatca ggaaactcga 240
 g 241

<210> 891
 <211> 431
 <212> DNA
 <213> Homo sapiens

<400> 891
 gaattcggcc aagaggccta aaaatatctg ttttaataaca agataaccac atcaagatgg 60
 ttggaaaagct gaagcagaac ttactattgg catgtctggt gattagttct gtgactgtgt 120
 ttacactggg ccagcatgcc atggaatgcc atcacccgat agaggaacgt agccagccag 180
 tcaaattgga gagcacaagg accactgtga gaactggcct ggacctcaaa gccaacaaaa 240
 cctttgccta tcacaaagat atgcctttaa tatttattgg aggtgtgcct cggagtggaa 300
 ccacactcat gaggggccatg ctggacgcac atcctgacat tcgctgtgga gaggaacca 360
 gggtcattcc ccgaatcctg gccctgaagc agatgtgggt acgggtcaagt aaagagaaga 420
 tcaagctcga g 431

<210> 892
 <211> 384
 <212> DNA
 <213> Homo sapiens

<400> 892

```

gaattcggcc aaagaggcct agtctgtcct gttgtgtggg gcgaagtgat ggactctgcc 60
aggtggacat gctgtgggtg gatgttcccg gcgtgtgccg ggcctgaatg gacaggggcc 120
acttcacagc atgtcaggga aaatcactgt cacacaattc caatggattt tgtgtctctt 180
ttgaaaaaaa aaaattcttt agcgtaaaca tgaatttttt ttcaatgtag cccctgggga 240
atgaatgaaa ttttgagctt cttcaatacg taaaattaaa ttataccac tgagggagag 300
accctttctg aaagaagtat ggccaaaagc actttaatgc tgctgacatt gttgttttta 360
tgttcatttg ctggagcgct cgag 384

```

<210> 893

<211> 208

<212> DNA

<213> Homo sapiens

<400> 893

```

gaattcggcc aaagaggcct agtggggcct ggctatctag aaaccaccgc aatggctgga 60
gccaaagttt gtcaatgggg taaacatttc agaaggtagg cagggcatgc cctgaggcca 120
ggaggcctct gccgtectgg ctgtgtcttc aggatggcca attctcacag aaaccaccac 180
aaggaaagat ctctggggac gactcgag 208

```

<210> 894

<211> 479

<212> DNA

<213> Homo sapiens

<400> 894

```

gaattcgcgg ccgcgtcgac atcaatatct gtattatggt gctatatatt ggtaatgac 60
ctttaatat gggaagggat tttaaaaata ctgtgattaa actgggttct tcctttgatt 120
ttcatatttt aaataaagcc acagtcattt atacaaaaga aaagcatctg tccctgggca 180
aatcttttga ggacagaggt caaagtaaac tgcataaggt ttttacatca tttctgtatg 240
tatttgatat atagatcaat atctgtacaa atttaattct ttattttctt ggtaactcgt 300
gatcattgag aaagtgtttg aaactttctc atgaagtgtat tatataatgg cgtgaaaaat 360
tcctttggaa aaatttatgt tcctttcatt tttaccaa atgcaaatttt cagcatggat 420
gtgaaaagca ttaaaattat aactttgtgt acaagatgaa aataattcac aactcgag 479

```

<210> 895

<211> 386

<212> DNA

<213> Homo sapiens

<400> 895

```

gaattcgcgg ccgcgtcgac atcaaaaatg agggatgtaa gtttcaatgt gagtatttct 60
gaatagtttt ttcaaatgc agccaagtca gtaatactct gttgtaactt tagatagggt 120
atctatgaat taaaaatccc tgaatgtgac attactctaa aatcttgcat cttgaactgg 180
agagcactgt tgttttctgg taggagggtcc atgaagcatg cattagaggt agcttctttt 240
cctggaggaa gatttggatg agtatgtatt ttttatattg aaacagacat gaatatattt 300
tgagatgaa agtaaaacta gcaggaatgt taagaaaaaa cttaaaattg ctttaaagta 360
taatgtcgaa tccccgaat ctcgag 386

```

<210> 896

<211> 202

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (40)..(41)

<220>

<221> unsure

<222> (62)

<400> 896

```

gaattcgcg cgcgctcgac actttaacca gtagaacatn ncaaaaatga cactttgcta 60
tntttgggta caagccttga gcatgtcagg cagcttctac ttttgtaact ttgggagctc 120
tgagttgctg ccgtgcaaga agctgtcata ccttgctgga gagatgatgt ggagaggaag 180
agattccagg acagtactcg ag

```

202

<210> 897

<211> 266

<212> DNA

<213> Homo sapiens

<400> 897

```

gaattcgcg cgcgctcgac cacagacttc tccactgata tctatgttag tatttatcca 60
gcttcttact tggatatatgc acttggattt ttataaggta tctcaaat aatattgtcca 120
aaactaaact tctgattctc tgtatacttc cagcttgctt ctcccacagt gtttccaatc 180
tcagtaaatg gcaacctat ccttctagt ctttaggcca aaagcttgga atcactcttc 240
cttttcttcc cccacatccc ctcgag

```

266

<210> 898

<211> 180

<212> DNA

<213> Homo sapiens

<400> 898

```

gaattcgcg cgcgctcgac cttgcattgc gtggttttag ggaagcaggg tctggctttt 60
aatatgaact gcaaaaagca gcttctcact gatatttttt tgttggtgtt tctggggggg 120
ttttttgttt tgtttttaa gcctttgagt gcatattttt ttctctgtct gaaactcgag 180

```

<210> 899

<211> 200

<212> DNA

<213> Homo sapiens

<400> 899

```

gaattcgcg cgcgctcgac atgggccact acactccagc ctgggtgaca gagcgagact 60
ccatctcaaa aataaaaaga gttgctagaa aaggtagaac ccacatttct ctggcttcca 120
aagcctgtgt tctttctgct gtattatgct tttttataac aaccaggcta atatatctta 180
aataccatcg tacactcgag

```

200

<210> 900

<211> 163

<212> DNA

<213> Homo sapiens

<400> 900

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163

<210> 901

<211> 186

<212> DNA

<213> Homo sapiens

<400> 901

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caattggtgg gtagcgcagg aaatactgat caaaatcata ttctgtttgc aacaggcgca 180

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ctcgag

186

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<211> 212

<212> DNA

<213> Homo sapiens

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cactacactt tatcttccct aagggtttcc tgctcctcct ggtcttaggt gaggtcattt 180
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<211> 192

<212> DNA

<213> Homo sapiens

<400> 903

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ttaaatatct ttaattttat aagcttcctt atgacagtcc ttatccactg tattctttcg 180
gttctcccta ta 192

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<211> 196

<212> DNA

<213> Homo sapiens

<400> 904

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acagaaatac gtcttgccat tctgtgttca ttcgccagat tcattgctag ttgggataca 180
agcaagccga ctcgag 196

<210> 905

<211> 259

<212> DNA

<213> Homo sapiens

<400> 905

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cttgggcatt ccttctctgt tctgcatgct gtttctctcc ctcagatgtt gtctcccaa 240
ctccataaa agtctcgag 259

<210> 906

<211> 208

<212> DNA

<213> Homo sapiens

<400> 906

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tgtgtctgtg tgtgtgtctg tgtgtgtgtc tgtgtgtcta atatttagac taaaccatgg 180
taaattgtacg caccagtaa acctcgag 208

<210> 907

<211> 212

<212> DNA

<213> Homo sapiens

<400> 907

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ggttacaact catgagagga ttcttatttc tgatcaatat attgtgtttt tggaaaggac 180
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<210> 908

<211> 137

<212> DNA

<213> Homo sapiens

<400> 908

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accatcaggt tctaggggtt gtgataggca caacatatat attctacttt tggtattga 120
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<210> 909

<211> 209

<212> DNA

<213> Homo sapiens

<400> 909

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aaatgaattt atgggttctt aacatgtatt tgtgttttat tttagtcctt atttgtttta 180
gtgttcacat ctgcccagg ctactcgag 209

<210> 910

<211> 392

<212> DNA

<213> Homo sapiens

<400> 910

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gtgtgtgtat gtattgttat gtctcattgt gttttatgaa taaagatata tctcatctt 180
tgtcaagcaa actacaaagt attagataat actttctcta gttttctaag catccattaa 240
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<210> 911

<211> 192

<212> DNA

<213> Homo sapiens

<400> 911

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tcagtcttac ctttaacttc actgtgtgac cctggaaaaa tatctttctt ctctactccc 180
actcaactcg ag 192

<210> 912

<211> 226

<212> DNA

<213> Homo sapiens

<400> 912

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 ttttatttcc ttactttact ttgatcctt cccagtcctt cagaatttta acttctatat 180
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<210> 913

<211> 465

<212> DNA

<213> Homo sapiens

<400> 913

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 ttgtagttta caaagtttta ttccagaagg aaaaaagcca cttcacctag aaattttgca 180
 aacaaaatcaa cttttactct gtgagtaatc cagggcctat caagactaca ttttagttga 240
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 gtggacattt cagccttgaa ggcagtgggt cagcttgctg agccatacct ctgtgaatct 420
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<210> 914

<211> 172

<212> DNA

<213> Homo sapiens

<400> 914

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<210> 915

<211> 185

<212> DNA

<213> Homo sapiens

<400> 915

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 aaaaaaatgca gatggtttca aacatctcct ttttcgcat gtttggtatg tacttcttga 120
 ctgccatttt tggctacttg acattctatg acaacgtgca gtccgacctc cttcacaaac 180
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<210> 916

<211> 219

<212> DNA

<213> Homo sapiens

<400> 916

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 ttgatttgta tttgccaaac agcccttttg cttgttaaag ctatagctaa ctctcaggag 180
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<210> 917

<211> 270

<212> DNA

<213> Homo sapiens

<400> 917

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 agacttgtag agattagaaa gattatggat tactttgagg ctatgaaaat tgataattct 180
 ttaatttcaa cagtcagata tatgttagtg tttagagtac ttttcagctt tctattagaa 240
 catccgaaag ttaggggaca gaagctcgag 270

<210> 918
 <211> 154
 <212> DNA
 <213> Homo sapiens

<400> 918
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<210> 919
 <211> 210
 <212> DNA
 <213> Homo sapiens

<400> 919
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 ggctttacct gttgaaacac ctaggtagct atattgaaa tcaatccatc atatatgcat 180
 gggctctaaaa ttttgaactg tattctcgag 210

<210> 920
 <211> 551
 <212> DNA
 <213> Homo sapiens

<400> 920
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 tagattcaag acataatctc ttgtaagatc taaatagagc aaatgtaaac aaaagtgcac 120
 ttttgatttc ttgttaattt tagatgcttt cctagcttac aaaaagttct atttttgggt 180
 taaaaaatcaa tcaactttct gatatttccc cttctgcaat gttattgttc ataagaaaac 240
 acgagctgaa aatgggaaatc tgcagttgtt tcagttgtct tgaatttctt tcagtggcca 300
 catcatttcc acgttttcca catccgggag gaagcctgga ctgtgcagcc ttcgggcacc 360
 cggcacagac actgtgctgg caggagcttc agacacgcca agtggatgga tttggattga 420
 acgcatatga aacaggagac gggttctcat gtgagatcaa agctcctcca aagcctgttc 480
 aagctctaag cgattctcaa atgtttaccat ttattaaagg taaactacac ctgttgaagc 540
 ccgcgtcga g 551

<210> 921
 <211> 164
 <212> DNA
 <213> Homo sapiens

<400> 921
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 ttctcattga aacaatgatt ctcttaaaca actctcaaat ctgcccactt ggctacatgc 120
 ttttgcaata ttccagacca aattaccatg atctgtcact cgag 164

<210> 922
 <211> 194
 <212> DNA
 <213> Homo sapiens

<400> 922
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tggatctttt gatacagatt gaaaaagcct ttattcaaca cctaaaatgt gtcaggtgct 120
ttggctttgt actaacatgg ttactgatta ttatgggttt atccctttta aaatacaaag 180
aagcaggtct cgag 194

<210> 923
<211> 200
<212> DNA
<213> Homo sapiens

<400> 923
gaattcgagg ccgcgtcgac gagatgcttg aggtgcagtg ttggggatcc agagccatgt 60
cggacctgct actactgggc ctgattgggg gcctgactct cttactgctg ctgacgctgc 120
tggcctttgc cgggtactca gggctactgg ctggggtgga agtgagtgtt gggtcacccc 180
ccatcgcaa cgtactcgag 200

<210> 924
<211> 158
<212> DNA
<213> Homo sapiens

<400> 924
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ggatccctta tgcctcgag tttgtccctt agaagaatta tctccagata gtattgatgc 120
acatacgttt gattttgaaa ctatccccca tctcagag 158

<210> 925
<211> 187
<212> DNA
<213> Homo sapiens

<400> 925
gaattcgagg ccgcgtcgac gtgtcacagt catcaacatt ttttgtgtaa gcagaaactt 60
tattgtgtgc tagttactta atatcagtggt ttattccatt ttcttcatta tcatattcca 120
tattataata attagatgtg aagacatgca ctttcgtgta ttgagtattt ataggatcag 180
tctcgag 187

<210> 926
<211> 164
<212> DNA
<213> Homo sapiens

<400> 926
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gttttttaaaa ttcttgaggaga aatcatatgc tgtgatcaac catagcgtg tttttttttt 120
aatagcagga aatgtatatata agtctattac cgcacttact cgag 164

<210> 927
<211> 192
<212> DNA
<213> Homo sapiens

<400> 927
gaattcgagg ccgcgtcgac cttgcttcag aaattgaaat ctgaaggacg tcgggtgctg 60
attttatcac agatgattct tatgttggac attttagaga tgttcttgaa cttccattac 120
ctcacctatg taagaatcga tgaaaatgcc agcagtgagc aacggcagga actgatgagg 180
agtccctcag ag 192

<210> 928
<211> 167
<212> DNA

<213> Homo sapiens

<400> 928

gaattcgcgg ccgcgtcgac cctaaaccgt cgattgaatt ctagacctgc ctgcagcctg 60
 accaacaatgg tgaaatgctc tctctcctaa aaaaaaaaaa tttatatata tatatcagcc 120
 aggtgtggtg gcacgtgcct gtgatccag ctacgctgga gctcgag 167

<210> 929

<211> 144

<212> DNA

<213> Homo sapiens

<400> 929

gaattcgcgg ccgcgtcgac acctcctcca tttaaataaa ctggtgactt tccttttatt 60
 ttttaaaagt ggaaaccgt tgtgtgcctc tcgatttaag gggttctgat gacattatc 120
 ttaagaccag cattgatcct cgag 144

<210> 930

<211> 213

<212> DNA

<213> Homo sapiens

<400> 930

gaattcgcgg ccgcgtcgac agtttttgca tgtaaagttg ttcatagtag ccttgaatga 60
 tattttgtct tcgggtggtg tcaggtgtaa tagctcccat tttgtttatc tttcaaaga 120
 accagctttt tttgtttcat ttatcttttc tttttttta tttttgttc aatttcattt 180
 agttctgctc tgatgagaat gctacttctc gag 213

<210> 931

<211> 252

<212> DNA

<213> Homo sapiens

<400> 931

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 aagtctaatt tggggaaaat aaagagcaac agaaaagaga acacttggtc caacacataa 120
 aaaggggatg aatatttttag agagtttggg tagacttgaa tattatttgt ttagaacctg 180
 aatctcaagt ctaagtctgt aacaagattt ctcttcacga tgatgaggag tctgatgagg 240
 agagctctcg ag 252

<210> 932

<211> 437

<212> DNA

<213> Homo sapiens

<400> 932

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 tcaggagctc ggtggcaatg cggcggtggc tgccccgatt tctccagct gccactcctt 120
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 cagtacggat cgaacagatg ctgagcttgc ccgccgaggt cagcagcgac aacttggagt 240
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 cagagggccc cgcacctcta ccgacgcggg agccagagca agagcagctc ccggggacct 360
 caacgccgga gagcaaagtc ctgtcacgc aggcagacgc cttggcgctc cgggggcgaa 420
 tccgtgaagc cctcgag 437

<210> 933

<211> 137

<212> DNA

<213> Homo sapiens

<400> 933

gaattcgcg cgcgctcgac ctataagctg ttgcaacttt aggttcctca atggatacaa 60
 aatttgcat tatactggct ctatcttgca caagtatgat gtgccatcaa atgcagaatt 120
 atagcaggaa tctcgag 137

<210> 934

<211> 190

<212> DNA

<213> Homo sapiens

<400> 934

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 ggaaacaaag gacccatcgc aaatgttttc catgctgac tccaaagtgg tgagtttatg 120
 tgtgattttt attttgttta tgcctctctg tattttccga atttcataca ataaatatct 180
 gttactcgag 190

<210> 935

<211> 169

<212> DNA

<213> Homo sapiens

<400> 935

gaattcgcg cgcgctcgac aggtccattt catctaagtt gtcacattta tgtgtgtaga 60
 atttttcata gcattcacct tacttacctt tttaatgccg gtgggggttg caatgatagt 120
 ctctgatatt gcagatttta gtgatgtgtg tttttccccc cgcctcgag 169

<210> 936

<211> 159

<212> DNA

<213> Homo sapiens

<400> 936

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 gcctgggtgt gaatgggtgt ctctctcttc accatcatca gcttcatggt tttctttttt 120
 ctttttaaaa ctgtattttt tttgtgcggc actctcgag 159

<210> 937

<211> 234

<212> DNA

<213> Homo sapiens

<400> 937

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 cctcaaatat atttaaatac tagttctgtt atcttgtttt ggcctttctt tttagggtacc 120
 ccaatgatgc atatgttgac tgtgctgtgg ttgtttctg gcgattttat tcttaccagt 180
 cactgttttc agtgttgtct tttcttact caacattctg caaagtcact cgag 234

<210> 938

<211> 152

<212> DNA

<213> Homo sapiens

<400> 938

gaattcgcg cgcgctcgac atattatttt acatcattgt tttcgtcctt tttattttca 60
 tttgtgtct ctaatttaga cctttattac catacacctg gtttatgttc acagtctcct 120
 aaatgatctc ctccataccg ctagtactcg ag 152

<210> 939

<211> 275

<212> DNA

<213> Homo sapiens

<400> 939

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gaattcgcgg ccgcgtcgac catagccttc ctctgtcct actcatgaga ctgcctccat 60
ttcttccttc tgcaaccctg ctctatcag ctgaaccctt ctttcggagt gttagtgagt 120
acccgtctct cccagcccc tcagctgggtg ggctgggtg tgcagcggc aaatggggct 180
ctggttccaa tgggccactc tcctctctct cttgttcctt gtgcagaaaa cttttgcttc 240
actccactgc cctctctagt tcccgatccc tcgag 275
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<210> 940

<211> 246

<212> DNA

<213> Homo sapiens

<400> 940

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gaattcgcgg ccgcgtcgac caacaacaaa aaaaagactt tattctctgt tgcagtgta 60
tgtaaccct tttattgcat ttaatttcta cagggtgtag tctactatta tttttgttcc 120
agtatctcat caagtcaaat aagcacagag taagaatttc aaagctagag agggctgaca 180
ataatagaaa acagaaacat actcaatata tactcctctc tcactatgaa gctggggcta 240
ctcgag 246
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<210> 941

<211> 168

<212> DNA

<213> Homo sapiens

<400> 941

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gaattcgcgg ccgcgtcgac atttaattaa tcaattcaag acatttttga tattacagct 60
tttgctctta ggtggagctg ttaaagttaa ataagtgtga atatctgtca aatacagttt 120
ttgcaagagt gcatgtacat tttatatatt gtaagaaaag ctctcgag 168
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<210> 942

<211> 205

<212> DNA

<213> Homo sapiens

<400> 942

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gaattcgcgg ccgcgtcgac gaagccttct gtaccatttt acgaatttct gtcttcataa 60
tataagtga aatactgtca tttcaatttt ctgcttttaa ttgtttttaa taagcattcc 120
aaagtgtac agacttaagc ttttaataca tcagtcattc agttgataga caaagtttagc 180
gatgctttat gctaggatac tcgag 205
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<210> 943

<211> 188

<212> DNA

<213> Homo sapiens

<400> 943

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gaattcgcgg ccgcgtcgac ctgagcattc cagccgggcc atcctgtgaa aatgatgtta 60
ctttattttt cagttttttt cttctcttta tccaggacac atccccacca gacaccagct 120
cctctgcccc atccaggcct ctatccccc cagtggtcca tgtctccagg acagccactc 180
acctcgag 188
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<210> 944

<211> 241

<212> DNA

<213> Homo sapiens

<400> 944

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gaattcgcgg ccgcgtcgac gaatcatata gtatatagac ttttcagatt ggctttcttc 60
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acttagtgac atttatttaa atttcctaata gtctttttat agtttgatag ctttttttta 120
 ttcttttaaat ttttttttct ctgctgcctc tctaattgca gaaagtcac ttatttttag 180
 cacatttcat ttgatattc cattatctgg gtgtaccaga gtttctccat atcacctcga 240
 g 241

<210> 945
 <211> 355
 <212> DNA
 <213> Homo sapiens

<400> 945
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 atatgtcttc tactttgcct ccttcattct actactgaga gaggtacttc gacctgggtgt 120
 cctgtgggtt ctaaggaatt tgaatgatcc agatttcaat ccagtacagg aaatgatcca 180
 tttgccaata tataggcacc tccgaagatt tattttgtca gtgattgtct ttggctccat 240
 tgcctcctg atgctttggc ttctatacgt tataattaag agtgtgctgc ctaattttct 300
 tccatacaat gtcattgctc acagtgtatg tccagtgtgt gaactgtccc tcgag 355

<210> 946
 <211> 187
 <212> DNA
 <213> Homo sapiens

<400> 946
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 gactctttta aagaaaaaat attcagtctt taacactcgt taaagcatgc aaaggaagac 120
 tttattcagg atcatcgtga taggtatttg aagcacagca gtgagatttt gcaatggggc 180
 actcgag 187

<210> 947
 <211> 298
 <212> DNA
 <213> Homo sapiens

<400> 947
 gaattcgagg ccgcgtcgac ggaaaagaat cttaatgcag ctatcaagac ccagttggat 60
 gtgttttagct ttgtcactac acttaaggag ggcatttttt attttaaacc aaaaggggac 120
 agaaagctta gtgaggagtt tagaagccct accctttcaa gaagtgttga tgggaattgaa 180
 gacaaaccca ggagaaggga acacgagggt gaggagaaca ggggtggcctt cagacaccca 240
 ggccaacaca tgcaagggt tagacttact ggaaaactcc agagcgctga acctcgag 298

<210> 948
 <211> 214
 <212> DNA
 <213> Homo sapiens

<400> 948
 gaattcgagg ccgcgtcgac aaacaaaaca aatttcctac ctcaggatcc aaaagatatt 60
 atcctatatatt gtctcctaaa agttttatag cctagccttt tacatttagg ttcttaattc 120
 ttaatccacc tggaaataagt ttttgtatat ttttaaaagt agagggttta tctcattttt 180
 cccgatagat atgcaattat cctgtacct cgag 214

<210> 949
 <211> 216
 <212> DNA
 <213> Homo sapiens

<400> 949
 gaattcgagg ccgcgtcgac tgcagattgg ctccgagccc ctgacacccat gtatttgttg 60
 gactttgtga agccagaatt tctcttgctt aggacacttg ctgatgcct gattttgttg 120

gatgatattt taccaaatc caagtgggtt gacagcaatg ttcttcaaata tataagagaa 180
aatagtatct ctctcagtga aatcgaatgt ctcgag 216

<210> 950
<211> 272
<212> DNA
<213> Homo sapiens

<400> 950
gaattcgcgg ccgcgtcgac agtatctgtt tcttttaaat ggagcaggac tttaacaatga 60
ttacaaaatc attctatatt actttttttt tattocagcc ctttacagct gtctcaccta 120
ttcataatc agtagcagct ttttcttta gatactcatc ttttttgcac tcatgtttca 180
ctagtttatg cagtaattta gataatttag ttactagcgt gagtacacct accacaaaaca 240
acatgggaat aaacaaaacc gaatcactcg ag 272

<210> 951
<211> 224
<212> DNA
<213> Homo sapiens

<400> 951
gaattcgcgg ccgcgtcgac atataagagc acgttgtaaa cttgaaagag acaaaggcac 60
aaatgtggct gttgattaat ttgactgctt ctggttgctc gtcacctcca tgccatgcac 120
tgtgcttgct aattgcttta tgggggcatt ctcttattta ttcccagcc ctgggaaata 180
ggagctgtca ttatccttct ctttctgcac aaggaaaact cgag 224

<210> 952
<211> 164
<212> DNA
<213> Homo sapiens

<400> 952
gaattcgcgg ccgcgtcgac gggggagcag gataaaagcg gtctttcagt ttttattata 60
tgtcattctc ctatgttttt caaatcatta ttctatgtct cttctcagta aggcctatcc 120
tgaccaactc atctaaaatt acaacttccc accacactct cgag 164

<210> 953
<211> 210
<212> DNA
<213> Homo sapiens

<400> 953
gaattcgcgg ccgcgtcgac gcattttgtg ttttctacg tggtcattt cagccaggta 60
tagttttctg tgttcacctg gtatttctta cagacaaaaa tcatgaaaaa gcgaatgcaa 120
aatttcagta tgttcaaatt gtttcttagt atatcggtgg ctttggaatg catttgcat 180
ctcaaaaaca gtttcacagc aaaactcgag 210

<210> 954
<211> 191
<212> DNA
<213> Homo sapiens

<400> 954
gaattcgcgg ccgcgtcgac ataaaattac gtcattatc atttggtcat tcaattcaaca 60
aatttttgat gaagtaaaat aatagtataa gcataacaac tgctatttat tgaacactta 120
atatgtcca ggttctaata tacatacttt actggctgta tctacacaa aacacacaac 180
aagcactcga g 191

<210> 955
<211> 195

<212> DNA

<213> Homo sapiens

<400> 955

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gaattcgcg ccgcgtcgac atttcttatt agccaatatt tattaagcat ccgctgagaa 60
ctttctgtg cattgggctt acgggaggat ttttttgc taaagtgtgat tacactgcc 120
ttcttgaact tgttctcac ttagggagaa caatttgagg gtaatatgaa cagaatattt 180
gtgagcatac tcgag 195

```

<210> 956

<211> 231

<212> DNA

<213> Homo sapiens

<400> 956

```

gaattcgcg ccgcgtcgac ctacttacta aattgagttt ttaaaaagac ttagtgtgac 60
atttgacagt gtctttcaaa cgaacttctc taacaagttt atagttattt tcctgtttca 120
acactattag aagtcttata aattatgcta attagcatgg cagtcattgt acacactctt 180
aacattgcc aagaactgtt gatttcgttt gagaaaaccc caggactcga g 231

```

<210> 957

<211> 214

<212> DNA

<213> Homo sapiens

<400> 957

```

gaattcgcg ccgcgtcgac cgagatccac ggctgcatcc cctacgaacc ccatgaaatt 60
cctgaggaat aaagcaataa ttccggcatag acctgctctt gttaaagtaa ttttaatttc 120
gagcgtagcc ttcagcattg ccctgatatg tgggatggca atctcctata tgatatatcg 180
actggcacag gctgaggaaa gacaacagct cgag 214

```

<210> 958

<211> 183

<212> DNA

<213> Homo sapiens

<400> 958

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gaattcgcg ccgcgtcgac taattacctg aagctttagt aataaagaac taattttttt 60
tgtcagttac cacatcttct ttttagcttt aagagggttag tagtgcaaa tactgaggct 120
aaagggttaag caagatttcc aggtttacag agatattaat taatctggat gaggtctctc 180
gag 183

```

<210> 959

<211> 199

<212> DNA

<213> Homo sapiens

<400> 959

```

gaattcgcg ccgcgtcgac atttgcgttg actgtggatt tctctctgcc tttggaacat 60
ttgtgcaagg atgagagggg atagtttaga tcctctaact gcatactgtg taggttataa 120
agccacagta atgtgtttcc tttgcagttg tgccttctat tccttgctcc agactagctc 180
tgatagggaa gctctcgag 199

```

<210> 960

<211> 195

<212> DNA

<213> Homo sapiens

<400> 960

```

gaattcgcg ccgcgtcgac cttttttaat actatgaaga aaccaaggca gaattacgac 60

```

ctctggttct tttttttttt ttctttttta gacaggttgc gttctgtcgc cctagctgga 120
 gtgcagcggg gtgatcacag cacactgccca cctccacctt tgaggctcaa gcagtcctcc 180
 catctcaagc tcgag 195

<210> 961
 <211> 161
 <212> DNA
 <213> Homo sapiens

<400> 961
 gaattcgcgg ccgcgtcgac ctcaaattta aaaaaaaaaa aaagaagaag aagaaaacta 60
 gtgggaaaaa agtgagagga atactttttt gaaattggta tcggaaggaa ctggagaaga 120
 gaaaacaaca gtgccaaatg agaaaagaac agttcctcga g 161

<210> 962
 <211> 252
 <212> DNA
 <213> Homo sapiens

<400> 962
 gaattcgcgg ccgcgtcgac caaagagtct tgaattcttt tgttttccca gtaccaaatt 60
 tacttttagt ttatctatga aatgggtgata aactttcgtt gtaagtatca tttgatagca 120
 ttgaagtatt taactttttt gttggagcca gagtctcagt ctaggttgga gtatagtggc 180
 gccaccggct ctatcttagc tcaactgcaac ctccatctcc caggttcaag cagttctcat 240
 gccttactcg ag 252

<210> 963
 <211> 153
 <212> DNA
 <213> Homo sapiens

<400> 963
 gaattcgcgg ccgcgtcgac tgctttgtgg acacagattt tcaggagat ttaggggaga 60
 gaaacttacg agtgaatgag atactttatt ctaaacagtt tgaatgtcat tgtgattttt 120
 ttgtcttttag ttgatgatgg tgaggctcctc gag 153

<210> 964
 <211> 216
 <212> DNA
 <213> Homo sapiens

<400> 964
 gaattcgcgg ccgcgtcgac gccaatctct ttttttttca gggccaattc ttaatacatt 60
 ttaaggattt gtgaacagat gggctgcact gcatttgtgt tgatcatgat gttctattct 120
 agacaactaa gaatgtcaaa aagcttccta tcttatgaca actccagtc agtgatggcg 180
 gctacttgga gcactgggtt agaaagaaaa ctcgag 216

<210> 965
 <211> 241
 <212> DNA
 <213> Homo sapiens

<400> 965
 gaattcgcgg ccgcgtcgac ccctaaacat gttaccaggt cttatccatt ccccgtaaat 60
 ttgcaccacc cccaaacact acattegctt tggctcacc tttatccctg agagacgtcg 120
 aaggccctt ctgcctgatg gcacattcag ctctgtgaag aaggtatgtc tgtgtttttg 180
 tgtgtgtgtt gtgtttatgt gtgtgtgctt tattttttta agcctaagat tccagctcga 240
 g 241

<210> 966

<211> 252
 <212> DNA
 <213> Homo sapiens

<400> 966
 gaattcgcgg ccgcgtcgac ggaaaaggaa ttctccaaaa aggtgaccca gagcatttgt 60
 tttgcaccag ctttgectgc cactgagtt cctttgacca gggttgectg taaatcttcc 120
 agggagattt caacacttgt ttgtcttaaa tactttctgc tatcatctca ttgccatcca 180
 ctcttcttcc agggctctgga tatatttttg aaagggattt agatgaaact ctattttgct 240
 gtggtactcg ag 252

<210> 967
 <211> 140
 <212> DNA
 <213> Homo sapiens

<400> 967
 gaattcgcgg ccgcgtcgac atagctttgt agagtgcaat cgactgttaa agtgggtgtcc 60
 tgccccagat tgccaccatg ttgttaaagt ccaatatcct gatgctaaac ctgttcgctg 120
 caaatgtggg caatctcgag 140

<210> 968
 <211> 180
 <212> DNA
 <213> Homo sapiens

<400> 968
 gaattcgcgg ccgcgtcgac attaattatt gctatgtctt ttacttctgt ttattttcta 60
 tcttcacgga ttaatttttt ccaaatgatt ccagaatctg ccacacacct accattcatt 120
 ttttcccacc aaatgctcag ttgtgtcagg ccatctgtcc attccccctg caccctcgag 180

<210> 969
 <211> 475
 <212> DNA
 <213> Homo sapiens

<400> 969
 gaattcgcgg ccgcgtcgac atcctactat gttgacagac atgatgaaag ggaatgtaac 60
 aaatgtcttc cctatgatcc ttattgggtg atggatcaac atgacattct caggctttgt 120
 cacaaccaag gtcccatttc cactgacct ccgttttaag cctatgttac agcaaggaa 180
 cgagctactc acattagatg catcctgggt gagttctgca tcctgggtact tcctcaatgt 240
 atttgggtct cggagcattt actctctgat tctggggcaa gataatgccg ctgaccaatc 300
 acgaatgatg caggagcaga tgacgggagc agccatggcc atgcccgcag acacaaacaa 360
 agctttcaag acagagtggg aagctttgga gctgacggat caccagtggg cactagatga 420
 tgtcgaagaa gagctcatgg ccaaagacct ccacttcgaa ggcattgtcc tcgag 475

<210> 970
 <211> 133
 <212> DNA
 <213> Homo sapiens

<400> 970
 gaattcgcgg ccgcgtcgac ctccaatcct tcctatgcat ttccctctct tcctectact 60
 atacaggtgt ccttgccctg ccagcccact gggcaacttc ccccatctcc ctatacctcc 120
 aaacactctc gag 133

<210> 971
 <211> 132
 <212> DNA
 <213> Homo sapiens

<400> 971
gaattcgcg cgcgctcgac ctgatttttc ctctacata gttgtatgtt gttatttttag 60
cttgcttttt tatgacagtt tcaggcacat tttatatgtt aattaagcat gcatatagcc 120
agctttctcg ag 132

<210> 972
<211> 188
<212> DNA
<213> Homo sapiens

<400> 972
gaattcgcg cgcgctcgac tctgacaatc agtttatgtg aatacatgtt ttatggatta 60
aaatattaga ttattattat atcctctaaa tgaattggct tgttatcggt atgaaatggc 120
cccttttata cttagtaatt tttttttgtt ctaaaatgtc ctttgggtatt gatgcagccg 180
tgctcgag 188

<210> 973
<211> 156
<212> DNA
<213> Homo sapiens

<400> 973
gaattcgcg cgcgctcgac gtgagatgtg agattgaaaa agtgtaagat gtcaggttaag 60
attacaataa aaactggaag tatattcttt tttcttttat cggtattata tttatatttt 120
ttcaagacag ggtcttgctc tgtccccaga ctcgag 156

<210> 974
<211> 189
<212> DNA
<213> Homo sapiens

<400> 974
gaattcgcg cgcgctcgac atctacctca gttaaacagt tgggtgctat tactaagtct 60
gtcaaattaa attggaaaaa gtaaccaaac agtgagatac aactccacat gaaacttgaa 120
attgtaattt cggtttattt aatgatattt ttatttattt gtgcctttta tgttgaaccc 180
cttctcgag 189

<210> 975
<211> 175
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (56)

<220>
<221> unsure
<222> (82)

<400> 975
gaattcgcg cgcgctcgac ttattgtatg atttattttg gagttatatt ctgatnacag 60
tgctccctct cccaaatagc antgattttt tccccctctt aaaatgtata atctgggtctc 120
aggttggatt ctttgggtaca tttctctctt ctggatgcc a tgcagcgcac tcgag 175

<210> 976
<211> 223
<212> DNA
<213> Homo sapiens

<400> 976

gaattcgcg cgcgctcgac aaattttagt tgtcccgga gttcttttgt atctgaaacc 60
 tcagttgtca agcttggaag tctgtacttt taaaatatcc tcaagcgatt ctgattacac 120
 atcagggtttg gaagcacttg gcataaagaa cttccccac ccaattcaaa gaaatagtat 180
 ttaagccctc ataattgtgca gtgtggttaa actgtgtctc gag 223

<210> 977

<211> 173

<212> DNA

<213> Homo sapiens

<400> 977

gaattcgcg cgcgctcgac gaaatgctct gctctcttct cttttccttg ctgtccctgg 60
 ggctggagga gcacgggcct ccccgaggag gggcttcagc ctccctagac tctgtctctc 120
 ttccaagggc taggcctggg ggaccagaag caagagtccc aagcgtctc gag 173

<210> 978

<211> 148

<212> DNA

<213> Homo sapiens

<400> 978

gaattcgcg cgcgctcgac attggtacca ggcacttaca aagctaaatt ttccgatgtt 60
 cctttcacca gcatactctc ttctcagttt attcattgat gcagaaagca ggcagctggg 120
 caccgggtgt gctgacggcc aactcgag 148

<210> 979

<211> 224

<212> DNA

<213> Homo sapiens

<400> 979

gaattcgcg cgcgctcgac atttattaat ctaggaaagt taaatagtcc cttgaaacaa 60
 aaatttttag ctgaatttat tgaaattata ttgtttaa gattacaatt tgaaaatact 120
 ccgtgtttga tgttaggctg aacatgaaaa ctttttattt gaatcagatt tttttttttt 180
 taagttttgt ccatcaacta aaggcacaaa cagacgacct cgag 224

<210> 980

<211> 135

<212> DNA

<213> Homo sapiens

<400> 980

gaattcgcg cgcgctcgac cgactttatt aaatctatga aaaatattta tattattgga 60
 ttattatggg cttgctcgac atggactatg gcggatacag tcgtaactga taaagcaaca 120
 acggtacaac tcgag 135

<210> 981

<211> 234

<212> DNA

<213> Homo sapiens

<400> 981

gaattcgcg cgcgctcgac ttctagacct gcttctttta ggcatactat attcatgcta 60
 ttaagggtaa ttgtgagat gcgagtaaatt ttcttttct ctctctgttc atcatttgct 120
 ctcttttctc ctatactgtc caaaccaggc actgctttcg atctccgtgg ttcatttaatt 180
 ctcttttctg attttctcatt tccaaattct gctcagcacc cccacactct cgag 234

<210> 982

<211> 189

<212> DNA

<213> Homo sapiens

<400> 982

gaattcgcgg ccgcgtcgac ctctgacaaa tagctcagga tgagtgggaag aaaatgggct 60
 ttgatgtctc tcacaactgc agtgggaatt ttaggaggga caatttgcca agaagatggg 120
 gcaggatttg aaaggatttg ggaggatggg gagtgggtg cagagaaagt tgtaggaagc 180
 gacctcgag 189

<210> 983

<211> 211

<212> DNA

<213> Homo sapiens

<400> 983

gaattcgcgg ccgcgtcgac ttgaattcta gacctgctc gaaaagctgg agagctgaca 60
 aggaagggtt cgagcggttt gctggcaaag ggatttctta caacctccag gcatgcgtct 120
 ttctgccctg ctggccttgg catccaaggt cactctgcc cccattacc gctatgggat 180
 gagccccca ggctctgat gcagactcga g 211

<210> 984

<211> 185

<212> DNA

<213> Homo sapiens

<400> 984

gaattcgcgg ccgcgtcgac cgcctctgtc gagcaatgtt gacaatctca tcaaaagtga 60
 tattccact gtgtttaatg tttttctgtt tctttctgtc tcttgggtgt tccttgaggg 120
 ctttgatgat cagggcagag gcagaaggca ccaccaagag acagaaagaa acagaaaaac 180
 tcgag 185

<210> 985

<211> 291

<212> DNA

<213> Homo sapiens

<400> 985

gaattcgcgg ccgcgtcgac agaacctgga aaaattaacc acatgagata cgatacacta 60
 ccccgatgt tgacgttggg aaatatccgt gctggcaaca aaatgattgt gatggaaacg 120
 tgtgcaggct tgggtctggg tgcaatgatg gaacgaatgg gaggttttgg ctccattatt 180
 cagctatacc ctggaggagg acctgttcgg gcagcaacag catgttttgg atttccaaa 240
 tcttttctca gtggtcttta cgaattccct ctctacaaag tggcactcga g 291

<210> 986

<211> 152

<212> DNA

<213> Homo sapiens

<400> 986

gaattcgcgg ccgcgtcgac gaccaccag gtaatccaca agattcttaa ttatatctgc 60
 aaagattcct ttttcaaatg agaccatctt tacagattct ggtgattagg atatggctat 120
 atctttttat cttttgttgg gggaatctcg ag 152

<210> 987

<211> 235

<212> DNA

<213> Homo sapiens

<400> 987

gaattcgcgg ccgcgtcgac cattataggg tgactgtaag actcaaatag agccactgcg 60
 cccagcctag gaagccctaa gttttaaaaa ctttttaaag tttaaattaa gcaaagagct 120

tcacaaaaac atttaaattc ggcaaaataag tgctattaca gagatgcata gatttggttt 180
tccttttctt accttccctc tcttctctt tccttccctt tcctccccc tcgag 235

<210> 988
<211> 171
<212> DNA
<213> Homo sapiens

<400> 988
gaattcgcgg ccgcgtcgac ttctattaat ctttaattccc ccattttgtt tctgtgatct 60
gctatgacat tacaaaaaaa attgggtttat ctttcttctt tcgttttcca gtgcctttat 120
tgcattggaac agtatccctt gcacccacgc ttcaccccggt ttagtctcga g 171

<210> 989
<211> 174
<212> DNA
<213> Homo sapiens

<400> 989
gaattcgcgg ccgcgtcgac ctcaaaattt ttgttttttg ggctccggtt tgttgagggg 60
ggctgttttg agaccagtt gctcatggtt ttaattctga cacatttaag tgggtgtttg 120
ttttgtttgt ttctgagggt tgggggtgtt ctctgttgcc caagctatct cgag 174

<210> 990
<211> 207
<212> DNA
<213> Homo sapiens

<400> 990
gaattcgcgg ccgcgtcgac gcctgtccct cctccgtaat agctcagcac ctcacacatg 60
cttccgactc agcctgtgct tttgcaactt atttgcttac ctattttctt ttcccactcc 120
tccatgactt tgtggaaggc aaggacttta tctcaggatt tctctatcac cagacctagc 180
ttggggcagc aaagcaggct cctcgag 207

<210> 991
<211> 169
<212> DNA
<213> Homo sapiens

<400> 991
gaattcgcgg ccgcgtcgac attttgtgtt ttgttttca ttcactctca agtattttct 60
aatttccctt gtgatttctt ctttgacccc ttgattgttt agaaatctgt taatttccac 120
acatttgtaa atgttccaat ttttcttttg ttattgccag ctccctcgag 169

<210> 992
<211> 181
<212> DNA
<213> Homo sapiens

<400> 992
gaattcgcgg ccgcgtcgac cctaaaccgt cgactctagt cagaagttat ctgagcaaag 60
agaaaataaaa gcctggcgta gacagtccca tagaaaatag aatccatagc cactgggctg 120
cccttcaatt tcccaattca ttccactaag tctcatgatg caaatctgtc actttctcga 180
g 181

<210> 993
<211> 355
<212> DNA
<213> Homo sapiens

<400> 993

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gaattcgcg cgcgctcgac gtggtctgt aatgctaaca agaagtctga aaacctgcc 60
aagcgctgt actgctttt tgcctctctt ttttctgtt ctgctcggg gatcccgagc 120
tgtctgcag ctgtaccctg agaactcaga gcagtggag ctgatcaca cccaggccac 180
aaaggcaggc ttctccggtg gcatggtggt agactaccct aacagtgcc aagcaaagaa 240
attctacctc tgcctgtttt ctgggccttc gacctttata ccagaggggc tgagtgaata 300
tcaggatgaa gttgaacca gggagtctgt gttcaccaat gagagagtc tcgag 355

```

<210> 994

<211> 249

<212> DNA

<213> Homo sapiens

<400> 994

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gaattcgcg cgcgctcgac ctgcaatggc tgggtaaaat tatttcatct ctgaaaaatc 60
aagaacaccc ttcataacc attcttcgcc acttcctcc tcccaaac ctaaaaaat 120
acaactcagg ccgggcacgg tacaaattaa tttaacacat cttttgataa tctcatcctt 180
ggtgttgaa aagacgggaa aatccaaaag tgtctattt gtgcccacat gctcaagtta 240
atactcgag 249

```

<210> 995

<211> 346

<212> DNA

<213> Homo sapiens

<400> 995

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gaattcgcg cgcgctcgac cttttctgct ctgtttgtt ttccctgcct gttgcgtgca 60
agggaaagtgc ttgtaaagt ctgtgtacg agatttttaa aataaaaatc gtttcgcagc 120
aggtttctac aaaataactg gtgctagctc aagaaatcat catctgacca tcagaaatct 180
tgactaaagg tgttgcatgg atttgggggt ctttcgggtt ttggtttgg gtctggcctt 240
tagcagggcc aatgtttccc acaccccggc ttcattgggta ctgctttgcc ttctaccaa 300
ggtgacgatg gtgtgcgtgg aaagagatga taccacaccc ctcgag 346

```

<210> 996

<211> 147

<212> DNA

<213> Homo sapiens

<400> 996

```

gaattcgcg cgcgctcgac gctttgatgt atagattaca ggtttcatca accttccaaa 60
gctttcagcc attgtttctt caagtattt gttttcctac tctttctct ctttctctt 120
ctaagtctca ttaccggtat gctcgag 147

```

<210> 997

<211> 329

<212> DNA

<213> Homo sapiens

<400> 997

```

gaattcgcg cgcgctcgac aaattattaa gggttaagta aggagtttta aataccaata 60
aaatcttatt tataacacca aacctcagaa gtccttcctc ttggcaatag ttttattgta 120
ttggtttaat ctgataatta atcttctgta ttatagtaag ctgaaaccaa aattgagaca 180
tgattgtttt atgtttgttg ctattattt tgaattttt tttttttt ttaagacaag 240
gtcttgctat gttgccaac tggcctcaaa ctctgagct caaagtgate ctccacatg 300
ctcctccac atcacatcac agtctcgag 329

```

<210> 998

<211> 293

<212> DNA

<213> Homo sapiens

<400> 998

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gaattcgcgg ccgcgtcgac atattttcta ataaataactt gagcgggtttt tgtctggcag 60
gcttccaaat ttgccaaaat taagcggttca gtattttcaa cacatacgct ttttactggc 120
ttatactgaa ctatctgatg agaattcctg tgttcccaaa gcaactgatg tttacaggtc 180
ttgtgtttct cctcctcctt tctaaggatg agggaatcca caacagactt tctctagaaa 240
acactaatga tggacaactt tttggtgtca tcaatgagtt ggctactctc gag 293

```

<210> 999

<211> 158

<212> DNA

<213> Homo sapiens

<400> 999

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gaattcgcgg ccgcgtcgac cttattcgtt gaactcaggc atttccactt gcatgtccca 60
cagttgagtc aggaccata atttcttctt gctttcccat gctattcctt tccttattga 120
caaatgccat catcttttct ctcactgccg cactcgag 158

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<210> 1000

<211> 152

<212> DNA

<213> Homo sapiens

<400> 1000

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gaattcgcgg ccgcgtcgac tttttaaatg aggttattta aatgttaaag aaagttttag 60
tggtcgcat attgggggta tcttcaactg catttgcagg aggttttcaa attaaagtgg 120
gtgcgagttt aattgacca acagcactcg ag 152

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<210> 1001

<211> 196

<212> DNA

<213> Homo sapiens

<400> 1001

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gtgactctca tctattaacc taagccagaa atcaaggagt catttttagat acttccttcc 60
actccttata atctgggtcag ttccataatga aatgatggtc attttcctaa tttttctact 120
tgtctctaaa tttactgcat atgattccat tcccttgat actgctagag tgaatagtca 180
cctcacgaac ctcgag 196

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<210> 1002

<211> 311

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (280)

<400> 1002

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gaattcgcgg ccgcgtcgac aacttttttca gcaactaaaa aagccacagg agttgaactg 60
ctaggattct gactatgctg tgggtggctag tgctcctact cctacctaca ttaaaatctg 120
ttttttgttc tcttgtaact agcctttacc ttccatacac agaggatctg tcaactgtggc 180
tctggcccaa acctgacctt cactctggaa cgagaacaga ggtttctacc cacaccgtcc 240
cctcgaagcc ggggacagcc tcacctgct ggctctcgn tggagcagtg ccctcaccaa 300
ctgtcctcga g 311

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<210> 1003

<211> 208

<212> DNA

<213> Homo sapiens

<400> 1003

gaattcgcgg ccgcgctcgac gaggaatggt agtattctct tatgaaatag taagtttggt 60
 atcatttgca gttttctgtt tatggtctgt cagagcagtg acttcagagg ggcaacctgg 120
 acagttgact gctcccatca ccaaaaccaa actacacaca cacacacggt cccaaactgc 180
 accaaggcac cccaaagcac cactcgag 208

<210> 1004

<211> 223

<212> DNA

<213> Homo sapiens

<400> 1004

gaattcgcgg ccgcgctcgac agtttttggg ctgtgaattt aatgttttag gaagttccca 60
 tttaagattc tttaaaatgg tttcttctgt tgtgctttta ttctttata ttaaaatctt 120
 tgatttatct aaaattactt ttgtgaaaga gtggtatagt gagaatagct ttttagagaa 180
 aacaaaaaca aatggtttga atatttgctc caacactctc gag 223

<210> 1005

<211> 166

<212> DNA

<213> Homo sapiens

<400> 1005

gaattcgcgg ccgcgctcgac tgggcattac tatgttagtt ggaataactg gactctttta 60
 cactcaacta attggcatca tcacagatac aacatctatt gaaaagatgt caaactgttg 120
 tgaagatata tcgaggcccc gaaagccatg gcagcagcac ctcgag 166

<210> 1006

<211> 175

<212> DNA

<213> Homo sapiens

<400> 1006

gaattcgcgg ccgcgctcgac gaacaacgtg ggctttcatg atgtatgtac ctttctcttt 60
 cttttgttgc atgtggggga cagtattgct tcaactaatg tttattactt taaaacacga 120
 aagggtatgag gaagtaaacc aaaacagtcc acagtcttca aacaggacct tcgag 175

<210> 1007

<211> 191

<212> DNA

<213> Homo sapiens

<400> 1007

gaattcgcgg ccgcgctcgac gggaaaacaa agaaacaaac tataaaagaa agcaaagaaa 60
 atctttgtga tttgggtgca gagataggac tccaaaaaca taagaaaaaa actggtaaac 120
 tgaataaatt gataaactgg acttcacaaa aattaaatac atttactatg aaaaaaacag 180
 tgctactcga g 191

<210> 1008

<211> 190

<212> DNA

<213> Homo sapiens

<400> 1008

gaattcgcgg ccgcgctcgac ccaggatttc aactatactc atccacagac ttttccatt 60
 gggtagaat tgaacagaa ctgacagaac caggatttga ataccagcct tttgactcca 120
 aatcagggac aagatgcagt ttgtatgtt aattatcttt attgggtttg atattgtggc 180
 cccactcgag 190

<210> 1009

<211> 245
 <212> DNA
 <213> Homo sapiens

<400> 1009
 gaattcgcgg ccgcgtcgac ttcaatctct agagggttgg cagtttcttt ttatcaaatt 60
 cttcccttaa taagctgcag cctgtgaatc tcaaaataat ggaagtttta aaaacagaaa 120
 gaaaaagatt tttattttta tttttttatt tttatttttt taagacaggg tcttgctctg 180
 ttgccagga tggaatgcag tggcacaatc gcggctcgct gcggcctcaa tctctggggc 240
 tcgag 245

<210> 1010
 <211> 183
 <212> DNA
 <213> Homo sapiens

<400> 1010
 gaattcgcgg ccgcgtcgac tgaagttctg aaaaaattt taggagattc ctgctttcta 60
 ggggtgctgaa gaaagactac ttaaaatcac tattaatag tacagtaaag aggagatacc 120
 tgtattttga actttgcata aaattgatgt ttctttatgg ttaaatttag attaatactc 180
 gag 183

<210> 1011
 <211> 141
 <212> DNA
 <213> Homo sapiens

<400> 1011
 gaattcgcgg ccgcgtcgac ccagactctc atatccatgg ctttcttgtt ttataaaata 60
 gtatacttac tgtgccttaa acagaacttg gatccctctt atttccacta cattcctcct 120
 tgcctcgtta aggacctcga g 141

<210> 1012
 <211> 162
 <212> DNA
 <213> Homo sapiens

<400> 1012
 gaattcgcgg ccgcgtcgac cttgtatgtg tcatttgagt ggtttccaga ttggagcgag 60
 gttattctga tctaaatgaa cagcattttt ttcttagcc tctggttgcc actctgggta 120
 tctctcctat gggcaaagcc attagaaatg catccactcg ag 162

<210> 1013
 <211> 217
 <212> DNA
 <213> Homo sapiens

<400> 1013
 gaattcgcgg ccgcgtcgac atctttttcc tgtggctgct tcaaaaactt tgtctttgag 60
 caatattact attatgtgtc tagatatagt ttcttttttt atccagcttg ggattcttag 120
 aaattcttca tttttagtt tgatgtcttt tgaaagtgtt ggaaaattcc cagtcagaat 180
 atcctcagat catgtttcta tcccaattc tctcgag 217

<210> 1014
 <211> 265
 <212> DNA
 <213> Homo sapiens

<400> 1014
 gaattcgcgg ccgcgtcgac actgatatac gatagacagc acatatataa aacgtaaaat 60

ttgataagtt ttggcatatg tatgcacatg caaaaccatc accataatca agaccgataa 120
 cataccatc atccataaaa gtctcttcc gtcccttgt attcccttat taagaaacta 180
 ctaaagtgtt aagtatttgt gctattttcc attcctatca gcagtacatg ataattctcc 240
 ttgtccata tcgtctgagc tcgag 265

<210> 1015
 <211> 127
 <212> DNA
 <213> Homo sapiens

<400> 1015
 gaattcgcg cgcgctcgac caaggacttt ccccatgca agtcttcagc agacgagcca 60
 cacagttcca agtacatctt aagaagcaca ctctagatgc agaatgaaga ttcactatctt 120
 gctcgag 127

<210> 1016
 <211> 231
 <212> DNA
 <213> Homo sapiens

<400> 1016
 gaattcgcg cgcgctcgac gcctggctag ttttaagggt tttaaacagg cattgagaca 60
 tctataatgg tctgctgct tttggatctg actcaaaact agccctgcct tctatttttc 120
 tttctttttt tttttttttt gaggcagct tactgtatgg ccgaggctgg agtgcagtgg 180
 catgatcttg actcaatgca acctgtcttt cgggttcaag tgattctcga g 231

<210> 1017
 <211> 209
 <212> DNA
 <213> Homo sapiens

<400> 1017
 gaattcgcg cgcgctcgac agcttaatcc tttctagctt ctgatttaaa gtgagagaca 60
 tgagactctt cctttcactt gtatacttag gggccattgt cgggttattc attagcttaa 120
 tttcaatatt gttgtgtctc aggagtagga atatccaaag agagggagaa agacttgggg 180
 agcagctggg cagtgaaca actctcgag 209

<210> 1018
 <211> 205
 <212> DNA
 <213> Homo sapiens

<400> 1018
 gaattcgcg cgcgctcgac ataacccttt aatggetccc tatgccccag gattaagtcc 60
 aaacaccatg gtgtggcatg tgagaaagtc ttcccttctg tggcttctgc agctcttcag 120
 cttcatctct tgccactctg tcatctctgt gtccccagt catgtcccat ggacacagt 180
 tgcagtcata ccccaattc tcgag 205

<210> 1019
 <211> 218
 <212> DNA
 <213> Homo sapiens

<400> 1019
 gaattcgcg cgcgctcgac cttcatcccc accttcttcc tcatctcttc tacagtttga 60
 tgctgctggg caatttcac cacttcttag gcttcagttc tcaaccatct actgatgatg 120
 actcccaaat gtttatccct gccctgacta cctaccctgt atgtctttct gaataaacg 180
 ctcttaatec caactgttta ttatactcat ctctcgag 218

<210> 1020

<211> 259
 <212> DNA
 <213> Homo sapiens

<400> 1020
 gaattcgagg ccgcgtcgac cctaaaccgt cgattgaatt ctagacctgc cattcaaccc 60
 ccctcatcac actctcacac tttctgagct gagatccaca gtaaggaata cactgtttca 120
 tcttcgccct aggcacatac tctcatccgc agctgaaatg cagtttcaga atgtgaatcc 180
 ttatttcacg ttctgtgtgg tgatgttttc tgttttctct cttgcctcct cctcagcatt 240
 ggctacacac ccactcgag 259

<210> 1021
 <211> 165
 <212> DNA
 <213> Homo sapiens

<400> 1021
 gaattcgagg ccgcgtcgac gcccatagga gttgaaaaat cctgctgctc tcagctatat 60
 tttttctccc attatttata aatgtttgct tttaaactga ttttattttc cattctcccc 120
 tggagtgtgg ccagggggaga gtgggggtggg aagacagatc tcgag 165

<210> 1022
 <211> 195
 <212> DNA
 <213> Homo sapiens

<400> 1022
 gaattcgagg ccgcgtcgac ttttaagttc tagagatcgg gtctcgttat gttgcctag 60
 ttgattttga actcttgggt ctgcctcagt cttccaaaat gttgggatta caggcatgag 120
 ccaccttgcc cttcccgaaa ctgccatatt gttttccgta atagctgcat catcttacat 180
 gcccctgtgc tcgag 195

<210> 1023
 <211> 143
 <212> DNA
 <213> Homo sapiens

<400> 1023
 gaattcgagg ccgcgtcgac aatcattcca acaatatttc tgtgattgtc tgtaacgaac 60
 tactttttct gatttttgat cagtgatctt tgactataat agaaaagaaa gtttaaatgt 120
 tatggaaggt gctggggctc gag 143

<210> 1024
 <211> 166
 <212> DNA
 <213> Homo sapiens

<400> 1024
 gaattcgagg ccgcgtcgac caggaaagca ttgaattaaa ttatacagta ccattttctc 60
 aggtattgag cttaaagagaa tggagctaaa attgccctgc tgtcttgta ttacctatt 120
 tctaattctg tcattttctt tccaaaaatc tcacgcatat ctcgag 166

<210> 1025
 <211> 164
 <212> DNA
 <213> Homo sapiens

<400> 1025
 gaattcgagg ccgcgtcgac attggaaata tcatccagac agaaagtcag caaacatctt 60
 acttaattctg cagtacagac caaatggacc taatagacat ttacagaaca ttttatccaa 120

tggctgcaga gtacacattc ttcagctcat ggatcattct cgag

164

<210> 1026

<211> 139

<212> DNA

<213> Homo sapiens

<400> 1026

gaattcgcgg ccgcgtcgac tgacattatt atcaattaac attttacttc cttctagctc 60
tctacatttt cattttctca tctcataaat ctcattccct atgatttttt ggtggggatg 120
tgttacttac ggactcgag 139

<210> 1027

<211> 174

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (42)

<220>

<221> unsure

<222> (56)..(57)

<220>

<221> unsure

<222> (61)

<220>

<221> unsure

<222> (64)

<400> 1027

gaattcgcgg ccgcgtcgac caaataccct ggttggttg tnacaagaaa gaattnnggc 60
ntanctcaga tacaaaagtg gaaaaagaaa cggtataat ccatggggaa gactttctat 120
ttcttagtct gtctcctgtc ccaaatagct cagctctcct caccctaaact cgag 174

<210> 1028

<211> 169

<212> DNA

<213> Homo sapiens

<400> 1028

gaattcgcgg ccgcgtcgac gtatatgtta attgagacaa gcagggttgta aaatgacctt 60
ctcttcccat tcttctcatg ttgtctctca aaaagatata cttcttttct ttcttttttc 120
tttttctttt tttagatag acagactctc tctgccacc agactcgag 169

<210> 1029

<211> 265

<212> DNA

<213> Homo sapiens

<400> 1029

gaattcgcgg ccgcgtcgac gagtcttttag agttttcttag gtgaacgac atcatcca 60
tcagcaaaca gtgagtttga cttctcctt aatgatttgg atgcccttta tttctttctc 120
ttgtctgatt gctctggcta ggacttccag tactatgttg aagaggagtg gtgacagtgg 180
gcaccttctg ctagtccag ttctcagagg gaatgctttc aacttttccc cattcagtat 240
ttgtttggt gcaggccatc tcgag 265

<210> 1030
 <211> 223
 <212> DNA
 <213> Homo sapiens

<400> 1030
 gaattcgcgg ccgcgtcgac ctgagtcgtc taaaattctg cattacagtt gcgattatTT 60
 tcctttgata ttacaatttt gatttatgtt ttttataaca cttgtatTTT tccttattac 120
 cacatcaata tatattcatt gtggaaaact atgtaaaaat gcagaaaaga atacattaaa 180
 aaataaaaac tcctgcattt tactccttac tgatactctc gag 223

<210> 1031
 <211> 135
 <212> DNA
 <213> Homo sapiens

<400> 1031
 gaattcgcgg ccgcgtcgaca aagcttgtga gctcaccaaa caaggatttc agtgtagatt 60
 ttgtctttct tgaacttaaa gaaacaaatg acaaagtttg aatggaaaag cctgctgttg 120
 ttccccacgc tcgag 135

<210> 1032
 <211> 186
 <212> DNA
 <213> Homo sapiens

<400> 1032
 gaattcgcgg ccgcgtcgac cccggctttt cttggagccc aagagttttc tgagtgtgca 60
 gagaaccctt ctatcatgaa gactttatTT agagtcgggc tagggttgtt actgccttta 120
 ccaggcttcg tattcccttc ctctgtgtct ggcctacctt ctacagtttc tggccactta 180
 ctcgag 186

<210> 1033
 <211> 165
 <212> DNA
 <213> Homo sapiens

<400> 1033
 gaattcgcgg ccgcgtcgac gaaaaaaaa gtgccttttg ctgcttttaa gaattggggT 60
 atatggtatg aagcagccat gtacttgat tttcctgggc tttcctgggc actcttctct 120
 cttggcagat gttttcttaa agtgaacaca ccagaagcgc tcgag 165

<210> 1034
 <211> 259
 <212> DNA
 <213> Homo sapiens

<400> 1034
 gaattcgcgg ccgcgtcgac ctttgatcca tggaaacatt ttataaaata atttccaaaa 60
 taatttctcg gaaatctgga attgtagtct gtagcaaat gggattatTT attaatTTaa 120
 tttaatTTaa tttatgagat cagagtcttg gtatgttgcg ttggctggTc tcgaactcct 180
 aggcttgagt gatccttctg cctcagcctc tctagtggct ggaactgtaa gtgcacacca 240
 ccatggcaca aatctcgag 259

<210> 1035
 <211> 205
 <212> DNA
 <213> Homo sapiens

<400> 1035

gaattcgcgg ccgcgtcgac attatttgct gtccttttga attcatttgt ctttttcaga 60
 ttgtggggca ttgccttggg aatactaaca ataatacaata atatcagtcg gggataaaga 120
 cacagataaa ttgcatggaa aaaggatggg ggggggatcc atttctggct gtgtatttcg 180
 ctgccttggt gtccctatcc tcgag 205

<210> 1036
 <211> 171
 <212> DNA
 <213> Homo sapiens

<400> 1036
 gaattcgcgg ccgcgtcgac ctgtttgtgg tgagggtgaa ttatgtgtgt ttttcttagc 60
 ttagtgtgtg cggtctttct ttttgtttct gagaatgctg tgttgagggg gtttttgagg 120
 aaaacggtgg ggttgggagg ttgtagtact tcaaacaag gtgaactcga g 171

<210> 1037
 <211> 251
 <212> DNA
 <213> Homo sapiens

<400> 1037
 gaattcgcgg ccgcgtcgac ccgttttccc acttcaacag ttacttcagg tttaaagtcc 60
 tttttatctc tgtaacctgg tgacataaag ccaggaacat tttcccacaa tccaccttag 120
 cataaaacat aacaatttca ttcattcagtt gttattgtgt agaaccaatg aacatgttgg 180
 tcatttgtct gtatttagtc tttatttgta ttgctatatt tgagcattcc aagattgcag 240
 aggggtctcga g 251

<210> 1038
 <211> 159
 <212> DNA
 <213> Homo sapiens

<400> 1038
 gaattcgcgg ccgcgtcgac cccatatatc acaagcaata tgggaagaat aaaaaaagta 60
 aacctattat tattatattt gagatatggg ctctctcacc caggctggaa tgcagtgggt 120
 caatcacagc tcaatgcagc ctcaatctcc aagctcgag 159

<210> 1039
 <211> 188
 <212> DNA
 <213> Homo sapiens

<400> 1039
 gaattcgcgg ccgcgtcgac cttaaatttt tgcattcatta ttgcatatc tttgagacaa 60
 caaaaatttg ctttttttta gttttttttt tgttggtggg atctaaaaga ttcttatatg 120
 taaatacaaa tattacagag aaagtgaata tgatagccaa aatgtggatt atgaggatag 180
 cactcgag 188

<210> 1040
 <211> 207
 <212> DNA
 <213> Homo sapiens

<400> 1040
 gaattcgcgg ccgcgtcgac taaataaata aattaattaa ttaataaagt aataataata 60
 ataaagccca gcctgggttg tgtgctgtag gtagatattc atgttcaagg ctctgtctct 120
 tcctgacctc cgaactgttg tcataaaatc attcattcat acactaaacc atttgatag 180
 tatttactga atcccctact cctcgag 207

<210> 1041

<211> 177
 <212> DNA
 <213> Homo sapiens

<400> 1041
 gaattcgcgg ccgcgctcgac acccctcacc cccaaccctt caaccttata ttaccttgaa 60
 attccaccga tgctatatcc gggtttgttt gcaactttca agtgggtatt atttccgtta 120
 gctttggagg aatattcttg tgatcacgca atcaaccatc atgatagaaa cctcgag 177

<210> 1042
 <211> 172
 <212> DNA
 <213> Homo sapiens

<400> 1042
 gaattcgcgg ccgcgctcgac ccactttttg gagagtagca aatctagctt ttttgtacag 60
 acctagaaat tatctaaaga ttctatcttt ttacctcata tttcttagga atttaattgtt 120
 tatatgttgt ctttttttcc tatgtctttt ggctcaagca acgtcgctcg ag 172

<210> 1043
 <211> 378
 <212> DNA
 <213> Homo sapiens

<400> 1043
 gaattcgcgg ccgcgctcgac cagtcaggcg ctgtgggtca cgcctgtgat cccagcactt 60
 tgggaggccg aggtgggcag atcgccctgg gtcgggagtt tgagaccagc ctgaccgaca 120
 tggagaaacc catctctgct aaaaatgcaa aattggccgg gtgtgggtggc atgtgcctgt 180
 ggtcccggtc actcgggagg ctgaggcggg aggatcgctt gaacctgggg ggcgagggtt 240
 gaggtgggca gatcgcttgg gtcggggagt ttgagaccag cctgaccgac atggagaaac 300
 ccatctctgc taaaaatgca aaattggccg ggtgtgggtg catgtgcctg tgggtccggc 360
 tactagggag tgctcgag 378

<210> 1044
 <211> 437
 <212> DNA
 <213> Homo sapiens

<400> 1044
 gaattcgcgg ccgcgctcgac cgttcgattg agttgggggt gaactctggc gtcttctcag 60
 gtgggtaaag gaaccagcgc ttacgaccgt agatcacttc tgagtaccgg ggtccatgcc 120
 agtgggaagg caccctcag ccagctcctg cgattccaaa gctgtaagct ggagcgttcc 180
 ccagcaggcc aaatgggggt ggggagtagt gccgaaagag agaggccac tcgggtgaagt 240
 tgttgtcccc gaagaagtac aggggtgtcat tgcccaggga ggtgggggtc tgggggtgca 300
 gcagctgttc cacatactcc tggaagggca agtccacttt gtggtaggag taggtgttgg 360
 cgggtgtcag ccggaccact ctgtccccaa acgaagccag caacctgtcg cgggagcaca 420
 gggcccgga cctcgag 437

<210> 1045
 <211> 420
 <212> DNA
 <213> Homo sapiens

<400> 1045
 gaattcgcgg ccgcgctcgac gcggggatcc ttggcgccat tgtgtgccgt gggcgtctcg 60
 tacaccgct agcccaggcg cagtcggcag taggggtcca tgccgggtcat gccgtaattc 120
 ttggccaaact ttgcctgtac caccgtgatg ttcagtcggc ccacgggtgcc cactgcgcct 180
 ccgtactgca gctgtgtggc cgctggggcg tccagctgga cctgccgctg ctgctgtgtg 240
 ggctgtatgc ggaggaagtc ctgcgggagc tcaccgatgt acaccggccc gcgctgagtg 300
 ctgacgggtg tcgccatggt gctgcggcgg ccccggtggc tcgccgacct gacagtgcag 360

cgccgggcca cctcctgcgc ccccgccgga gcctgcgacg gagacagtgc tcacctcgag 420

<210> 1046

<211> 424

<212> DNA

<213> Homo sapiens

<400> 1046

gaattcgcgg ccgcgtcgac tgctcgtcta agtgggtatgt taaggatgct gactgcgtgc 60
 cggcatagtc acagtgcgga cacttgtagg gtttctcacc tgaggaggat ggcgaggagg 120
 ggtgcgggct gtccctcctgg gcactcccgg tctgggagag gccgcctccg accccgctct 180
 cctcgggtgac gtttagaggag cccggcgtgg tggagcggct caccgactgg gactcctggt 240
 cactgcccga gccacgccgc tcattccaggc ccacgtgcag cccatcctcc tcgcccttgc 300
 ggtcccgcctt gtggacacgg gactgcacga ccacctgggt gtaagtgcgg aacaccgggc 360
 cgcagtcggg gcactcgggt ggcttctcct tcattgtccc aggacctgc aggttatact 420
 cgag 424

<210> 1047

<211> 477

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (251)

<400> 1047

gaattcgcgg ccgcgtcgac gggggaaaca agcctcccgg gtcttgcaat agccccacga 60
 ggagcccagg atggctgggg caggatggag cagcagagat gaaggagatg ggtgggttcc 120
 ctgctcacag gtgaggtgag ctatgctggg ctgggtgatg aaccagatgg gaggaggtgg 180
 tgagacaggg ggagagccag gtgccaggga tagctgctcc ctgttctggc accagcaatg 240
 agaaaataaa nacaccacag agtgtggcag caatcgctgg gggagggaca cacttggtgg 300
 tgcggggcagg tggggcagtg ggggttcaag tgttcaggtt ggacacacac cacttttgag 360
 atgactacga aagacccaag ggtgggcgtt aaataggggg ctggatacat aggtctggag 420
 ctacgcagga cgcgccagga aggaaatggg agatgataga atgggaattt tctcgag 477

<210> 1048

<211> 192

<212> DNA

<213> Homo sapiens

<400> 1048

gaattcgcgg ccgcgtcgac catgaaccca atccggagaa ggttccagcg ggtccccac 60
 cctcccctcc tctcctact tctcctcttg acagcgagga caggaggggg acaaggggac 120
 acctgggcag acccgccggc tctcccccca cccaccctcg cccctcacat catactccaa 180
 ccaaacctcg ag 192

<210> 1049

<211> 366

<212> DNA

<213> Homo sapiens

<400> 1049

gaattcgcgg ccgcgtcgac gttttctctt tcgatataata tgtctctggt tttctctggt 60
 tctacctcct tctctcccca ctgtttcttt ctgcttttat ctttctctct ctttctctct 120
 ctcccggtgca tctccagtgc catggggggc cctgtgctgg gggcgccagg agagccacct 180
 ggagccacgc ctgtgtcccc ggctttgggg agggtcgggt ggttggtgag tgcacgggtg 240
 gcgtgtctcc acgcgccccg ggcgacgca ctccccgggt ctgggatttg gctggcagta 300
 ccctgccccg ccccgccggt cgcgcctccc gccaccagcg atcgcttggg agaggggttac 360
 ctcgag 366

<210> 1050
 <211> 535
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (104)

<400> 1050
 gaattcgcg ccgcgtcgac atccccgaac cccgctttcc ggcccgcggc gaaccgcggc 60
 aactgttggt gctgccgcat tgctcccgcc gggctgtagc tgancgcgga gcccggtggg 120
 gccggtgagt ttgagttcct gagatctagt tggtagagaga catgatgttc taccggttgc 180
 tgtcgattgt tggaagacaa agagccagcc caggatggca gaactgggtc tctgcaagaa 240
 acagcgcac acgtgccgag gcgcgttcca tggccctgcc caccagga cagggtgggtc 300
 tctgtggagg tggaatcacg ggcacttctg tggcccatca ccaatccaaa atggggtgga 360
 aggatattgt ccttttggag cagggcagggc tggctgctgg ctctaccagg ttctgtgctg 420
 gcatcctgag cactgccagg cacttgacca ttgagcagaa gatggcagac tactcaaaca 480
 aactctacca tcagtttagg caagaaacag ggatccgaac agggtaacac tcgag 535

<210> 1051
 <211> 303
 <212> DNA
 <213> Homo sapiens

<400> 1051
 gaattcgcg ccgcgtcgac cacagacact gtggtgaact tccttatccg cgtggcctgt 60
 cagggttaatg acaacaccaa cacagcgggg tcccctgggg aggtgctctc tcgccggtgt 120
 gtgaaccttc tgaagactgc gttgcggcca gacatgtggc ccaagtccga actcaagctg 180
 cagtgttgc acaagctgct gatgactgtg gagcagccaa accaagtga ctatgggaat 240
 atctgcacgg gcctagaagt gctgagcttc ctgctaactg tcctccagtc cccaggcctc 300
 gag 303

<210> 1052
 <211> 533
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (286)

<400> 1052
 gaattcgcg ccgcgtcgac tgatgaagaa gcacaaggct gccgtggctc aggcttccc 60
 ggacctggct cagataaatg atctccaagc tcagctagaa gaagccaaca aagagaagca 120
 ggagctgcag gagaagctac aagccctcca gagccagggtg gatttctctg agcagtccat 180
 ggtggacaag tccctggtga gcaggcagga agctaagata cgggagctgg agacacgcct 240
 ggagtttgaa aggacgcca gtgaaacggc tggagagcct ggctanccgt ctcaaggaaa 300
 acatggagaa gctgactgag gagcgggatc agcgcatctg agccgagaac cgggagaagg 360
 aacagaacaa gcggctacag aggcagctcc gggacaccaa ggaggagatg ggcgagcttg 420
 ccaggaaagga ggccgaggcg agccgcaaga agcacgaact ggagatggat ctagaaagcc 480
 tggagggtgc taaccagagc ctgcaggctg acctaaagtt ggcattcctc gag 533

<210> 1053
 <211> 531
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure

<222> (511)

<400> 1053

```

gaattcgcgg cgcgctcgac cgcggccgcg tcgactcccc aaggaaaatc ttttcagctt 60
ccagacagca accacaacta tgcaagccat ctcggtgttc aggggctacg cggagaggaa 120
gcgcgggaaa cgggagaatg attccgcgtc tgtaatccag aggaacttcc gcaaacacct 180
gcgcatggtc ggcagccgga ggggtgaaggc ccagacgttc gctgagcggc gcgagcggag 240
cttcagccgg tcctggagcg accccacccc catgaaagcc gacacttccc acgactcccc 300
agacagcagt gacctgcaga gctcccactg cacgctggac gaggccttcg aggacctgga 360
ctgggacact gagaagggcc tggaggctgt ggctgcgcac accgaaggct tcgtgccacc 420
aaagggtcatg ctcatttcct ccaagggtgcc caaggctgag tacatcccca ctatcatccg 480
ccgggatgac ccctccatca tcccatacct nctacgacca tgaagctcga g 531

```

<210> 1054

<211> 454

<212> DNA

<213> Homo sapiens

<400> 1054

```

gaattcgcgg cgcgctcgac ggcgcttgcc tgtaatccca gctcctcagg gggctgagac 60
aggagaatcg cttgaacctg ggaggtggag gctgcagtga gctgagatcg cggcactgca 120
ccccagcctg ggctacagag tgagacttgg tctcaaaaaa aaaaacaaaa acaataaac 180
aaacaaaaaa caacaacaaa aacacacctg ggtactatc catcaaatga aggtactgtg 240
agttatctaa tcagtccctt gttgaggggc attttgattg tttcatgtcc ttactctta 300
ggaacagtga tgcagtgaat atcctgggtg atatttaata gacgttctct gaggtagact 360
tgccctggatg gagatgcatg gataatagac gctctgtgtt tctgctgccc attatactcc 420
aaacacttgc agcctgtgcg tcagtgcgct cgag 454

```

<210> 1055

<211> 435

<212> DNA

<213> Homo sapiens

<400> 1055

```

gaattcgcgg cgcgctcgac cgcccccgcc cccgccccgc tcccagaggg tcccagcctg 60
gcgggtgaaa gggcactggc ggttccccgt gagccgatgt ctccatgcgc ggctcctggg 120
ggtcctccct tttgcgcagg cgaggaaacg ggcttggggg tcaggaagca gccccaagcc 180
cgcttgaggc ggtgacatca ccagggttca ccttccacaa acacatttaa caacagacaa 240
aacgtgaacg aggagaaact ggaagtgcgc tttgaaccag ccacagtctc tacgtgtcat 300
ccaaggagcc cggcacagac cccgtgtcac ccccatgtca cccgcagacc ccgcgtcacc 360
catagatacg cacaccccggt gtcaccccca tgtcacccgc gtgtcaccca cagatacacg 420
gcccccgtag tcgag 435

```

<210> 1056

<211> 540

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (20)

<220>

<221> unsure

<222> (134) .. (135)

<400> 1056

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gaattcgcgg cgcgctcgan tgggcgtggg ggcagcgctc tgtaatctcg gctactcggg 60
aggctgagac aggagaattg cttgtacccc ggaggcagag gttgcagtga gtgagatcaa 120
gctgctgcac tccnccctgg gcgagagagc gagactttgc ctcaaaaaac aacaaaaaaa 180

```

```

acaacacta tggtttctgt cttggtaatt ctctctctca aatcacttgc tctggaggaa 240
tcaagctatc atgttgagaa cagcctaatt cagaggcctt catagttagg aactgaaacc 300
tcctaccaat aaccatgtga tgattttagt gcaaatcctt caattcaaat caagctttca 360
gatgactact atcttagcca gtaccttacc tgcaaaactca agaggggaccc taagccagaa 420
tcaaaacaact atgcctetga ttcttgaccc tcggaactgt gaaataacat ttgttgtttt 480
aatcgctaa gttaagggt ttgttacgca ctgatagata atacaggacc actactcgag 540

```

<210> 1057

<211> 703

<212> DNA

<213> Homo sapiens

<400> 1057

```

gaattcgcg ccgcgtcgac agggaacata tctttttttc agagcctctg tgtgctgggt 60
tactgtatac ttcccttgac agtagcaatg ctgatttgcc ggctgggtact ttggctgat 120
ccaggacctg taaacttcac ggttcggctt tttgtggtga ttgtgatgtt tgccctggct 180
atagtggcct ccacagcttt ccttgctgat agccagcctc caaacgcgag agccctagct 240
gtttatcctg ttttcctgtt ttactttgtc atcagttgga tgattctcac ctttactcct 300
cagtaaatca ggaatgggaa attaaaaacc agtgaattga aagcacatct gaaagatgca 360
attcaccatg gagctttgtc tctggccctt atttgtctaa ttttgagggt atttgataac 420
tgagtaggtg aggagattaa aaggggagcca tatagcactg tcaccctta tttgaggaa 480
tgatgtttga aaggetgttc ttttctctct taatgtcatt tctttaaaaa tacatgtgca 540
tactacacac agtatataat gcctccttaa ggcatgatgg agtcaccgtg gtccatttgg 600
gtgacaacca gtgacttggg aagcacatag atacatctta caagttgaat agagttgata 660
actattttca gttttgagaa taccagttca ggcagagctc gag 703

```

<210> 1058

<211> 263

<212> DNA

<213> Homo sapiens

<400> 1058

```

gaattcgcg ccgcgtcgac ccctgtctca aaacaaaaaa ccttccttta atcttacatc 60
agatgtgtgg gtttttaaaa ttatttatgt gttttattta ttttatttta ttgagacgga 120
gtcttgcctc gttgcctggg ctggagggca gtggcatgat ctcggctcac tgcaacctct 180
gcctcccatg ttcgagcggg tctcctgcct cagcctccca agtagctggg attacagggt 240
cccgccacca caccgaactc gag 263

```

<210> 1059

<211> 316

<212> DNA

<213> Homo sapiens

<400> 1059

```

gaattcgcg ccgcgtcgac ccagcatctc tcaacagtct cagctcgctc attcttaaga 60
tgtcagctta aatgttatct cttcagaggc ccccatgttc tctcttgcaa tggcctgttc 120
tattccatta ggggactttg ccatatatgg catatttgtg taaaagttcc atgagagcag 180
agggtttgtt tcctttatcc ctccatacac agcaactgga acaatacaat gcatagagta 240
aacatgcaac agataacctg aaggaaatgt gtttcatgcc ttcattcctt cctatacatt 300
attgctcccc ctcgag 316

```

<210> 1060

<211> 393

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (27)..(29)

<400> 1060

gaattcgcg cgcgctcgac ttgaatnnna gacatgcctg ctcaccccc actgcactaa 60
 cctaaataat ctctgattat tttctttttc tcttgctact accaaattct gttcttgagt 120
 gaggaagcag cttgggttaa aaacaaaagc cctgatatgt atatatattt ttttctctga 180
 agaataccat caggatgaag gctatgatta atacacataa ttgctacaaa tggcagctaa 240
 ctgcagaaaa ccacctccca gctgttggag gaaggaaatt gctgacagcc actccccatt 300
 ggggtggctac caaaagagag gagctcacag gagcaggaga gaatacacat ctccatccca 360
 cgtgacccat agagatgacc cattaggctc gag 393

<210> 1061

<211> 247

<212> DNA

<213> Homo sapiens

<400> 1061

gaattcgcg cgcgctcgac gctaaacgga ctgtttttat tgtagtaaaa gagctttgta 60
 aattaaccaa ttaattttta agccctaaat aagcttttct gtgcatttga gatctagaag 120
 atacagcttt attaatctga tctaaatttc tgaagggggc ttgtatttct gtaatcagtg 180
 atatcagtag tctactgttg gcaaagggca ttttttaaaa gaaatgcaca tagcaggctt 240
 tctcgag 247

<210> 1062

<211> 240

<212> DNA

<213> Homo sapiens

<400> 1062

gaattcgcg cgcgctcgac aaaatagccc tggaagtgtg gccttcagct cctctaccca 60
 cagctgacta aaaacattgg caagtttgtc acctaggtgt ttgtcacccg aatataaatg 120
 agaccatttt ctggccagaa aacttcagct atcacagtct acatttgtat gagttgcttg 180
 gctgtttttc caagcaaaag aaggtgcatg gtctcatgta tttccccca acacctcgag 240

<210> 1063

<211> 429

<212> DNA

<213> Homo sapiens

<400> 1063

gaattcgcg cgcgctcgac gtgggagcgg aggtagggga gctcagaggc aggaagcatt 60
 ttcggcaaac cactgcagag taggcattgt atccctccca ccagcactgg gggagcccaa 120
 tgcccaccac ggacaagggg tgccagacac ttgaactagc agccaaggaa gtccctacca 180
 tctcatgatg aggagcataa aggtggtgtg atgtgcaact gcctagaggc agataaataa 240
 atgtgaaggc aaagtgggcc aaggaagcaa gaggtggaaa agaccaacaa aattcaacta 300
 acttccctcc ccagtccaca actatgctaa ccccttctgc cactgggcca actgcagaga 360
 taaaaatgcc agtgactcac tccagggttg gctcttgagg ctgccacaag cctgatactc 420
 agcctcgag 429

<210> 1064

<211> 210

<212> DNA

<213> Homo sapiens

<400> 1064

gaattcgcg cgcgctcgac gaatgggatg cataccatag acgaacgagg cggagactat 60
 tgcgggaatc ttactgttca ggagctgttc ctagaactaa ctcccttact gtcattgatg 120
 tgcattccac tctgtgcttt tctgtacaac cattcaagtt ttaatttccc aggtgaacca 180
 tctttatctg ccattaccac aagcctcgag 210

<210> 1065

<211> 262

<212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (138)

<400> 1065
 gaagaaaaatg aagcacctgt ggttcctcct cctgctggtg gcggctccct tacgggtcct 60
 gtcccaggtg cagctgtatg agtcgggccc agggctgatg aagccctccg agaccctgtc 120
 cctcacctgc ggtgtctntg gtggctccct cagtgggtgt gccgacttct ggggctgggt 180
 ccgccaggcc cccgggaagg ggcttgagt gattggcaat atgcaccatc gtggaaatgc 240
 ccattacaat ccgtccctcg ag 262

<210> 1066
 <211> 262
 <212> DNA
 <213> Homo sapiens

<400> 1066
 gaattcgcgg ccgcgtcgac ggaccggcgg cgtgttgttg gcgttctaga ccttgaacga 60
 cgccgggtta ctggtggcgt tctggatctg gatcgcttc tgctcactgg ggatgctctt 120
 gaccgggac ttcgtcgagt cactgaagtc ctggaccttg accgtctccg gctgactggt 180
 gaagtctgag atctggacct acgtcggctt atcagggggg ttctggacct ggatcgccgg 240
 tgagtggctg gagaggctcg ag 262

<210> 1067
 <211> 123
 <212> DNA
 <213> Homo sapiens

<400> 1067
 gaattcgcgg ccgcgtcgac cgtcgattga attctagacc tgctcagagt tctcaattct 60
 gttacaatt taaaatttca ttaattgtgt ttaatataa tgaattctaa aaggctcctc 120
 gag 123

<210> 1068
 <211> 265
 <212> DNA
 <213> Homo sapiens

<400> 1068
 gaattcgcgg ccgcgtcgac ggggttctgt ttccatacaa cattgtttat ttccgattcc 60
 tcagaagatc ctttattatg aataacctca gtgtaatgtt aatttcccg ccccatgtca 120
 aaattgtcac cctaagcctt tttttttttt tttttttttt ggagacgggc tcaactctgtc 180
 agccacgctg gagtgcagtg acatgatctt gactcatggc aggccttgacc tcctgggctc 240
 aaggaccacc tccaagcac tcgag 265

<210> 1069
 <211> 153
 <212> DNA
 <213> Homo sapiens

<400> 1069
 gaattcgcgg ccgcgtcgac gattgtagat attgggctgt taattgtcag ttcagtgttt 60
 taatctgacg caggcttatg cggaggagaa tgttttcatg ttacttatac taacattagt 120
 tcttctatag ggtgatagat tggtcactc gag 153

<210> 1070
 <211> 563

<212> DNA

<213> Homo sapiens

<400> 1070

```

gaattcgcg cgcgctcgac agggcacttc ctctaagtaa acacaaatat ttctgtagtg 60
aactgtatgc atattccac tgagtaaagg ttataagaag cctcagggtca ggtcttacca 120
ccaaacttga aaacacttgg aatgcagctg ggcagggact tgagcagggtt ttgtcttgat 180
aagcaggtaa gaatggcaga aactggcctt attgtcaacc aatgtttttt tatataacctg 240
aagtattcat tgaattctag acctgcctcg agtatgggga gatgggaaaa ggcagggttag 300
gggcatgcag gctcagggaa cagggctctg gtgggtggat ggatagccat ggaggcagaa 360
agaggcctct gcaggaagaa cctgggagag cggagaggag gtgggtgaggc aggggagcac 420
tatggaatgg ccctgaggcc aggaggggct caggatgacc aggcaaaagc acagctggtc 480
caggatggag gggaggcctg cacagcatga gcaggaggct agaggagaca gaccatgagg 540
ccctgggaga cccctcactc gag

```

563

<210> 1071

<211> 511

<212> DNA

<213> Homo sapiens

<400> 1071

```

gaattcgcg cgcgctcgac gtcgatgcct tctagtctca gtgaatttaa cctgtgattt 60
tatgtctacg tatattgttc ctttactgaa cccaccacat gcggggccata aaatgagtga 120
aatcacagt caccctgttc tcttattttt gaagtgtttc acgatttcca gcatgtccat 180
cagatggggg gattgctaac ttctctctta ctcatgtact tacattctgt agttctcatt 240
gcatcacttt ggatgtttac ttgaaaaagc agaaactgtc tctttaaact tggccctcaa 300
tgtcatttgc gtatctctga gaacaatagc tatgtccac cccagtttgt atttccgttg 360
gttggtggca ctttttctc attcccccat ctcatcact tgtctgtttt ctggcactca 420
ctataatcag ccttgcaacta gagctgtttg tggacttggc ttcaccacct cctcctcagc 480
cctccccac ccattaaatt gcgagctcga g

```

511

<210> 1072

<211> 339

<212> DNA

<213> Homo sapiens

<400> 1072

```

gaattcgcg cgcgctcgac agggcatcga gtagtagtggg aacgtggtat gagatcagg 60
tggaagggtg aatgaagatt gaaaaaaaaa agacggcaaa tagagtagat gctgctagac 120
caattaggaa acttctagt caggcaagag ataagatag cataggctga ggacagggtg 180
tggtgatggt gatgcaaaga gcgttaggat tctgagatat ttggcaggta ctggtgatag 240
gtggagtggg ggtagaagag aaagatcatg agtttgactt tagatatgtt aagtttgatc 300
taccttgaag acatccaaga gaagacaccg ggactcgag

```

339

<210> 1073

<211> 226

<212> DNA

<213> Homo sapiens

<400> 1073

```

gaattcgcg cgcgctcgac ttgatattc tattccattt ttttcagtct tctttgcctt 60
tgctcttcaa ttttgaaagt ttctattgac acatcctcaa gctcagagac tctgcttagc 120
catgtccggg ctactaatga gcccatcaaa agcattcttc acttctgtca cagtattttg 180
ctctgtatca tttctttttt attctttctt agaacttccg ctcgag

```

226

<210> 1074

<211> 186

<212> DNA

<213> Homo sapiens

<400> 1074

gaattcgcg cgcgctcgac gcagatgtcc atttcaacag gcttaagtgc aaccatgaat 60
 ggaatcatcg aatctttgat tcttcttgga ataataagta ttcattctgt tgtaagaaac 120
 ctggctgttt tatgcttggg atgctgtgga ctacagaatc aggattttgc aaggaaacac 180
 ctcgag 186

<210> 1075

<211> 247

<212> DNA

<213> Homo sapiens

<400> 1075

gaattcgcg cgcgctcgac ggtagggatc caccacatat atttataggc ttccagagt 60
 gcttagccat tttgaaacca gtcattttct atttggcatg cttctagctt taacaattaa 120
 ccttcttaca ttaatacatg ctttgaatcc agagagtatc tgctgctttg gatctgaaat 180
 ggactggcag atctgctggg ctacagcaga gaaaaaatac tggggagaat taaaagtctt 240
 ccctata 247

<210> 1076

<211> 222

<212> DNA

<213> Homo sapiens

<400> 1076

gaattcgcg cgcgctcgac atacctecat ttgcaacaa aatttcattc ccacttctctg 60
 agtccatcca gagtgctgct ccaaccttcc tctgctctct gctaaatatt accgctctag 120
 tggatcatc ctattggcat actaactgct gctattttct ccattctgaa aacaggaata 180
 acaaattaac ttatcatgat tctacttccc caaatactcg ag 222

<210> 1077

<211> 167

<212> DNA

<213> Homo sapiens

<400> 1077

gaattcgcg cgcgctcgac ggtaaagggtg aagtcagctt tttctagctt acagttctgt 60
 catccagttc ctgagctaaa ataggcgcta cagttctgat tttggctttg tcatttgagt 120
 ctctggtctt tttctgtatg ggtcaagcta gaaggggaca actcgag 167

<210> 1078

<211> 170

<212> DNA

<213> Homo sapiens

<400> 1078

gaattcgcg tcgcgctcgac atatatttgt atttttgtat gctttggaaa aagacaggaa 60
 ataaacacca aaatgttgcc agtaggtatc tctgtgttaa gattagtgtt attattttct 120
 tttctgtact tttctgtatt tcccaactgt tatataatga gcgactcgag 170

<210> 1079

<211> 225

<212> DNA

<213> Homo sapiens

<400> 1079

gaattcgcg cgcgctcgac ctaatgcac acagcattct ttgaaatgga accagacaca 60
 gctgctct caatcctcag ctgggggctc ctacagcct cttgtattta ctgaggttg 120
 acacatcaca cagatcctgt ttggcattcc taccttacgg acgtctcagg ggtgacagga 180
 ccagggcaga gccccggtac aaacagacaa ggctgcaatc tcgag 225

<210> 1080
 <211> 214
 <212> DNA
 <213> Homo sapiens

<400> 1080
 gaattcgcgg ccgcgtcgac cgcatgtcca gtgggctggg aagcaagcac ttgaagagaa 60
 ggaaggggag aaagggtccc ccttgctgtc tgccctctgag gaatggaaat cctttagacc 120
 cggccttttt tggaccaata taaatttaat ttaaattgac agccttccat ttttcgagaa 180
 agtacaaaaca gaactgcttt agcaccact cgag 214

<210> 1081
 <211> 102
 <212> DNA
 <213> Homo sapiens

<400> 1081
 gaattcgcgg ccgcgtcgac gtgggtgtct tacaatactg tgctttttct ctccattaac 60
 ataatgcac tgagagtact tctccttcag catgttctcg ag 102

<210> 1082
 <211> 273
 <212> DNA
 <213> Homo sapiens

<400> 1082
 gaattcgcgg ccgcgtcgac agccaatata ttccatttta aagcaagcaa taaaaactta 60
 ttctgctgtt taatatTTTT attgacttta aaaagacttt gaacttagtg aaagagaatc 120
 agtcacctag aaatgtactg ctctcatcta gctgggaagg tcattgtaat ttcttctat 180
 atagatttgt ttgctctaga taagcggctc aatttgaata gatttttagt ggtagaaaga 240
 gatgacggaa gcacattaat ggaacaactc gag 273

<210> 1083
 <211> 264
 <212> DNA
 <213> Homo sapiens

<400> 1083
 gaaattcgcg gccgcgtcga ccctaaaccg tcgattgaat tctagacctg cctgctttcc 60
 tgccctgccc acctgcctca tattgtgtgg gccttttttt gtttgtttca ttcattgttt 120
 tttttttttt aattatttta aatgagattt ttgttttttt taaatgcaat atctctgtat 180
 acagactggc tgggccccac cccctgcgtg tggccctccc acagtatttt gtgcaatgaa 240
 gccctgctcc cagccactct cgag 264

<210> 1084
 <211> 383
 <212> DNA
 <213> Homo sapiens

<400> 1084
 gaattcgcgg ccgcgtcgac caacagccag tttggcctcg tggacatccc tgtggagtgc 60
 aagctgggtca ttgccaggt cctgctcctg gacttctgcc tggcgctcct ggccgaccgc 120
 gtccctgcagt tcttcttggg gaccccgaaag ctgaaagtgc cttcctgaga tggcagtgtc 180
 ggtaccact gccacacctg gctgcccgtg ggccgggaacc ccaacagggc cccgggaggg 240
 aaccctgccc ccaaccccc acagcaaggc tgtacagtct cggccttgga agactgagct 300
 gggaccccc cagccatccg ctggcttggc cagcagaacc agccccaagc cagcaccttt 360
 ggtaataaaa gcagcaactc gag 383

<210> 1085
 <211> 282

<212> DNA

<213> Homo sapiens

<400> 1085

```

gaattcgcg cgcgctcgac ctttgagatt gtcacttctg tacataaacc acctttgtga 60
ggctctttct ataaatacat attgttttaa aaaaagcaag aaaaaaagga aaacaaagga 120
aaatatcccc aaagttgttt tctagatttg tggctttaag aaaaacaaaa caaaacaaac 180
acattgtttt tctcagaacc aggattctct gagaggtcag agcatctcgc tgtttttttg 240
ttgttgtttt aaaatattat gatttggcta cttgcactcg ag 282

```

<210> 1086

<211> 184

<212> DNA

<213> Homo sapiens

<400> 1086

```

gaattcgcg cgcgctcgac cctgtttatt agaaagtga gagaggatga ttatgttcct 60
tcatctcttc agtgtcttag tactccctac acctgcgtta tggtatgacc tacctttgcg 120
atctgccagt ttgggggtca gcttaagtga gaattcatat tctgcttcac tggaaatcact 180
cgag 184

```

<210> 1087

<211> 190

<212> DNA

<213> Homo sapiens

<400> 1087

```

gaattcgcg cgcgctcgac gtgagtcacc atgcccggct attgctttct tatattgaca 60
gtgggtttgt actctctcta tgcctacgg cactgccatc agatgggtggg aaattatgac 120
agggtgttgc tgggtatcct gttagctaagt aatacctagc gaggaatca ggattagaaa 180
ataactcgag 190

```

<210> 1088

<211> 110

<212> DNA

<213> Homo sapiens

<400> 1088

```

gaattcgcg cgcgctcgac caaataataa aattgttcaa caggaaagctt tcttggccag 60
gtttctccac caaatccata atgctgatgt cctttgcccc tatgctcgag 110

```

<210> 1089

<211> 226

<212> DNA

<213> Homo sapiens

<400> 1089

```

gaattcgcg cgcgctcgac ctgtaataag cattataatt cctgttctta aaataataag 60
ttcatttaag gaaaaggggg tgaaaggaaa aatctgcaga atttaggtct gagataatac 120
catttcaaag cactgtgata caaattactt atatatgtta tatactgtgt gtgtgttaac 180
tacttttatt tgggggcttg ttttgcatac atgtgaaggt ctcgag 226

```

<210> 1090

<211> 267

<212> DNA

<213> Homo sapiens

<400> 1090

```

gaattcgcg cgcgctcgac ggcaggataa aacaacatag aaaatataaa acaatttttg 60
ctttgaaaaa tacagtgcag gtgaccattt actgcttatt ctgtaatcct tactgtctat 120
aattaacttc agtaacactg aaacttgatg aaaagtttta aaaaattatt tactgtaggg 180

```

acaaagttat atggaatgtt gttattttct atactatctg aatgcactgc cagtgaagac 240
tgtaaagaca gaacacaaac actcgag 267

<210> 1091
<211> 186
<212> DNA
<213> Homo sapiens

<400> 1091
gaattcgcgg ccgcgtcgac gtcattttgc tctttccct ctggtgaaaa atcattcctt 60
ttttatcccg tggcatatat atgtttgcct ttataaatta ggatcaattt ttgtatgttt 120
aggcagtcac ttttactttg cgtttttcta ttctgtttta aaagcattta tggccaaaaa 180
ctcgag 186

<210> 1092
<211> 282
<212> DNA
<213> Homo sapiens

<400> 1092
gaattcgcgg ccgcgtcgac gtggtctact cgtggataag ttcaaactaa atggatggga 60
aaaaatataa catcctaaca ttcataaagg aaagctgaag tggttacatt agaacaagca 120
atgttgctaa ggataagatg agacatttca taatgataaa tgggtgaatt catcaagaaa 180
acagttctaa acaggtgtgt acctaatcac agtttcaaaa tacatgaagt aaaatctgct 240
ctcattgaaa ggaaaaatat ataaaatcaa aatctactcg ag 282

<210> 1093
<211> 208
<212> DNA
<213> Homo sapiens

<400> 1093
gaattcgcgg ccgcgtcgac gccttctatt gtgctttgtt ttgtctgact tttctgcacc 60
ctgtttcctt tggatattca gttctctcaa cctcaagatt gagacggtgg tgggtatgct 120
tttccacttc catatgacct tcatgctgtt ctggaatcac acatgctacg aggtcatcct 180
tcacactact tgtaagccaa cactcgag 208

<210> 1094
<211> 187
<212> DNA
<213> Homo sapiens

<400> 1094
gaattcgcgg ccgcgtcgac ccttaatgcc atccttcatt gtctttctgg cttctcttct 60
tctggcacag taccattttg ggtctgtgcc ccagtgtgga gcaaaacatt gcctgtacca 120
ttctgatata cttcagaatt tgagagcaga agttaatgtg gaacaaaagt tttcaccatc 180
tctcgag 187

<210> 1095
<211> 221
<212> DNA
<213> Homo sapiens

<400> 1095
gaattcgcgg ccgcgtcgac ggcactgttt tttttttaa cagttaagta ctgatgtcaa 60
cagacaaata tttctgatca gatagtcccc tgtcaacagt agcaaatgtg gtttcataaa 120
gtgggaagaa aacagcattt taaagtaact ttttgggaga ctgatttgag taataataaa 180
actctgtgtc cccttaagaa aaaaaaaccc ttccgctcga g 221

<210> 1096

<211> 241

<212> DNA

<213> Homo sapiens

<400> 1096

```

gaattcgcg cgcgctcgac tataaataga tttttttgtt gaatgttaat tcagttatat 60
attttctctt tgatatgttc ttttagttgat gcaggccagt taaaatgagt gacttcaagt 120
tttagagaaa tacataacaa tgtcagttta taattatatt gttttttata caatttacta 180
ttttagaatc tcattcatat tccattgtat ttccatgaat gatacttttg gacaactcga 240
g                                                                                   241

```

<210> 1097

<211> 192

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (29)

<400> 1097

```

gaattcgcg cgcgctcgac gagacaccna aatccagtca gtatctaata tggcttttgt 60
taacttcctt caggagcaga cattcatata ggtgatactg tatttcagtc ctttcttttg 120
accccgagaag ccctagactg agaagataaa atggtcaggt tgttggggaa aaaaaaagtg 180
ctggctctcg ag                                                                                   192

```

<210> 1098

<211> 190

<212> DNA

<213> Homo sapiens

<400> 1098

```

gaattcgcg cgcgctcgac cgtcgattga attctagacc tgcctcgaga tgctccttct 60
taacgtgctg gcctctgtgc tcatggcctg catgacgctg ctgcccacct ggttgggagg 120
cgctcccccga ggccctcccg gccccgacat ctccctcgccc tgcggctcct ataaccccc 180
cccactcgag                                                                                   190

```

<210> 1099

<211> 152

<212> DNA

<213> Homo sapiens

<400> 1099

```

gaattcgcg cgcgctcgac gtgttggttg tttgtcagac tcttctgaaa gtttggagtt 60
aatgggagat gagaaagcat attgaaagaa tacttttctt tttttttaat tattattatt 120
atactttaag ttttagggta cgagcactcg ag                                                                                   152

```

<210> 1100

<211> 295

<212> DNA

<213> Homo sapiens

<400> 1100

```

gaattcgcg cgcgctcgac ccccgatcca ggcacctggc cctcagcggg cccacctttg 60
gtatcattgt gaagcacttc cccaagctgc tgcccaaggt cctgggtccag ggcactgtct 120
ttgcccgcac ggccctcgag cagaagacag agctgggtgtg cgagctacag aagcttcagt 180
actgctgtgg catgtgcgga gacggcgcca atgactgtgg ggcctgaag gcggctgatg 240
tcggcatctc gctgtcccag gcagaagcct cagtgggtctc acccttcacc tcgag                                                                                   295

```

<210> 1101

<211> 259
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (32)

<220>
 <221> unsure
 <222> (48)

<220>
 <221> unsure
 <222> (66)

<220>
 <221> unsure
 <222> (205)

<220>
 <221> unsure
 <222> (212)

<400> 1101
 gaattcgcgg ccgcgtcgac tattggagtg cnaagtgctg tgattgtngg tggaattgat 60
 tcaatntctc aatctttggc ccttgcaaaa aaaccacata taataatagc aactcctggt 120
 cgactgattg accacttgga aaatacgaaa ggtttcaact tgagagctct caaatacttg 180
 gtcatggatg aagccgaccg aatantgaat anggattttg agacagaggt tgacaagatc 240
 ctcaaagtga ttcctcgag 259

<210> 1102
 <211> 173
 <212> DNA
 <213> Homo sapiens

<400> 1102
 gaattcgcgg ccgcgtcgac gttaaggagt aggcctcctg agtaaaggag gtgtgatttt 60
 ttttttcttt gaggtgggag tatagttgga actaaataaa ctacgtgtga atttaccata 120
 tcaactaaaa ttttgatcaa atgggttttt taaatttgtt ggtacttctc gag 173

<210> 1103
 <211> 277
 <212> DNA
 <213> Homo sapiens

<400> 1103
 gaattcgcgg ccgcgtcgac ggggtgggta tgcgccaaacc ctatttcagg cagcgtctca 60
 agtaggtgga gccgatgtag ccaccccgca tggagcgctg cacgttctgc tcaaacagcc 120
 gccggttggt ctgcaggacc tctgcggcct ccttgttcag tgggtcctcg gggttgggct 180
 ccaagaagag atactgcagg ccataaatta tggagtttat cgtaaggact ggcttccagt 240
 cctctctgag gatgttgagg cagacgttgc cctcgag 277

<210> 1104
 <211> 208
 <212> DNA
 <213> Homo sapiens

<400> 1104
 gaattcgcgg ccgcgtcgac agaatacttc gcctaaaata ctgttaagtg gggttaattga 60

tacaagtttc tgtggtggaa aatttatgca ggttttcaag aatcctttt ttttttttt 120
 tttttttgag acggagtctc gctctgttgc cagctggaa tgcagtaac tgatcttggc 180
 tcactgcgac ctccacctct ccttcgag 208

<210> 1105
 <211> 180
 <212> DNA
 <213> Homo sapiens

<400> 1105
 gaattcgagg ccgcgtcgac gttcctctct ggcatgggtg ctcaaattga tgctaactgg 60
 aacttctctg attttgccta ccattttaca gtatttctct tctattttgg agccttttta 120
 ttggaagcag cagccacatc cctgcattgat ttgcattgca atacaacat aacgctcgag 180

<210> 1106
 <211> 309
 <212> DNA
 <213> Homo sapiens

<400> 1106
 gaattcgagg ccgcgtcgac gtcgacgggg ccgcgaattc ggggcgcgtc gaccaggaa 60
 aggcctgtgg ggctctctc ccgcgcctcc acacgcctc gcattccacc gaggcgccag 120
 cttctgcctg cagcttgctg aaactggcct ggaggttctg acaagaatta gagcggcggc 180
 cgttgcctgg gggatgacct ggaagcgaaa gagaccggca cgaattctag agtttcgggg 240
 tttccgaggg ttgagattgt acgggaaaca atgcattaac caaacctaaa aatcaaaca 300
 acactcgag 309

<210> 1107
 <211> 185
 <212> DNA
 <213> Homo sapiens

<400> 1107
 gaattcgagg ccgcgtcgac cagcattagc agaccgaaac aggagggaag gaagtggtaa 60
 cccaactcca ttaataaacc ccttggctgg aagagctcct tatgttgaa ttgtaacaaa 120
 accagcaaat gaacaatccc aggacttctc aatacacaat gaagattttc caggcattac 180
 tcgag 185

<210> 1108
 <211> 269
 <212> DNA
 <213> Homo sapiens

<400> 1108
 gaattcgagg ccgcgtcgac atgtattgga tgaacgaata tacctcatcc attggaattg 60
 gagtttttca ttcaggaatt gaagtctatg gcagagaatt tgcttatggg ggccatcctt 120
 accccttttc tggaatatatt gaaatttccc caggaaatgc ttctgaacta ggagaaacat 180
 ttaaatTTaa agaagctgtt gttttaggga gcacggactt cctagaagat gatatagaaa 240
 aaattgtaga agaactggga tcactcgag 269

<210> 1109
 <211> 164
 <212> DNA
 <213> Homo sapiens

<400> 1109
 gaattcgagg ccgcgtcgac acctgattac tttttcacct ctacaaccag gagaattttg 60
 aatttaaaaa taaatccaaa cattttctt catattatca atgcttatat attccttaga 120
 ctattgaaat ttggagaaa atgtatttgt gttcacttct cgag 164

<210> 1110
<211> 255
<212> DNA
<213> Homo sapiens

<400> 1110
gaattcgcgg ccgcgtcgac gattttaaaa tattttcttc ttaaatttct ctttcattgtt 60
atgaattggt tttctgattt tattgaatta tctttctgta ttatcttgta tcttattgag 120
ggttttttgt ttgtttgttt gtttgtgaga cagagtgtca ctctgtcacc taggctggag 180
tgcagtggcg tgatcttggc tcacaacaat ctttgccttc caagttcaag tgattctcct 240
gccccaaacc tcgag 255

<210> 1111
<211> 284
<212> DNA
<213> Homo sapiens

<400> 1111
gaattcgcgg ccgcgtcgac agctcttttg cctcagaatt ttcagtagcc agtatttctg 60
attaactaag ttgaaactct tattagaaac tttcagttgg tgatattgta ttctagaaga 120
tataaatgag aggtttggct tcctctcagt ttagaaattt attcaaagct aaagatgtat 180
atatacatat acctttgtgt gtatatatac acatatgtgt gtatgcagtt tgtcagggtta 240
tatatagaat ttctattaag gattttttta atggacagct cgag 284

<210> 1112
<211> 303
<212> DNA
<213> Homo sapiens

<400> 1112
gaattcgcgg ccgcgtcgac tgcaattcta atgcattcta cgtttttgaa aatcgataat 60
ccatggaagg tccatgggtt gatacctcag gtcaaaaatg tgtttactct gttgattgct 120
gtttcacttt acctgtatat cagatatata agctatgaac acaagtttgt agtaaaagta 180
tcttctgtct gggcaatggc tcacacctgt aattccaaca ctttgggggg ctcagggtggg 240
aggatttcta gtccccagga gtttgagacc agcctgggca ataaactaga ccccactctc 300
gag 303

<210> 1113
<211> 105
<212> DNA
<213> Homo sapiens

<400> 1113
gaattcgcgg ccgcgtcgac ggggcttgta atttacatga gaaccgtgct ggtcactagc 60
gctgtctgtg tctgtctgtc ctgcgggact tctgtctctc tcgag 105

<210> 1114
<211> 216
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (73)

<220>
<221> unsure
<222> (86)

<220>

<221> unsure

<222> (104)..(105)

<400> 1114

```

gaattcgcg cgcgctcgac gagaggagac acaggaagcc cagagagcca gatcgagaca 60
agaaacaccg agnaaaaagc agcacnaggg aaaaaagaga gacnnattcc aaagagaaaa 120
gtaattcatt ctctgacaaa ggggaagaaa gacataaaga aaagcgacac aaagaagggtt 180
ttcattttga tgatgagagg caccgtata ctcgag 216

```

<210> 1115

<211> 286

<212> DNA

<213> Homo sapiens

<400> 1115

```

gaattcgcg cgcgctcgac gctttctggt gattgggacc ctgatgccaa gtgcccactt 60
tgcaaaagag aaaaagttaa tgacctgct ccttggctc ctgtccatgc ttgcctggcc 120
tcctagagtt ggaggaacaa gccctctcct ggcagaggca ggagagcaag tgctctccta 180
tgatccaata catcaggcgg gagtgtctgag tccgtcagga caccactcct cgcagcatca 240
agggtccagt ggggtgggtc agggcagtga gaaggggtgg ctcgag 286

```

<210> 1116

<211> 170

<212> DNA

<213> Homo sapiens

<400> 1116

```

gaattcgcg cgcgctcgac gaagaaaata ccaagtgttc attctgtcat tagcaaggaa 60
caccaatgag gtttcttttt tttctctatt tagggcatat taaaattatc cttcagagta 120
cttgatttga aaatcaagtt tatgttctg aaaagaatcg tgggctcgag 170

```

<210> 1117

<211> 191

<212> DNA

<213> Homo sapiens

<400> 1117

```

gaattcgcg cgcgctcgac atttctcttg gaattgggct gctaacaact tttatgtatg 60
caaacaaaag cattgtaaat caggtttttc taagagaaag gtcctcaaag attcagtgtg 120
cttggttact ggtattctta gcaggatctt ctgttctttt atattacacc tttcattctc 180
agtcactcga g 191

```

<210> 1118

<211> 175

<212> DNA

<213> Homo sapiens

<400> 1118

```

gaattcgcg cgcgctcgac gttcttttcta tggaaccag ttggaaaaga tcatttggtta 60
accaggggct ctgttcttat agatgcatat cagaatgatc cacagtcaga actttgtggg 120
cctcttggtta atgttgaaa tttttcaaca ggcttggag acagccggac tcgag 175

```

<210> 1119

<211> 205

<212> DNA

<213> Homo sapiens

<400> 1119

```

gaattcgcg cgcgctcgac attctatagg atttctata tacgagatta tgccgtctgt 60
gaaaagagat cgttttattt cttcctttgt gatctggatg acctttattt cttttcttg 120

```

cctaattgcc ctgattagaa ttccactac aatgttgagt atttgtgga agagcagata 180
 ttcttgcctt gtccctgac tcgag 205

<210> 1120

<211> 276

<212> DNA

<213> Homo sapiens

<400> 1120

gaattcgcg cgcgctcgac cacagacata gttctaaatg actttcagct atttctagaa 60
 attagacaca tcttcctaag cgaaggttta ccatgtttaa ggttccatga aagaatgtgc 120
 cctaagttgt tgcccagccc ctggctgaga agaaacgggc gtgtgggagg cgggtgaaga 180
 gcacacaggg aggggacgga gaagctcctg agccagcctc cttcatggct cagtttcatt 240
 tcagtgcgtg gcacttccca gaagaaacga ctcgag 276

<210> 1121

<211> 339

<212> DNA

<213> Homo sapiens

<400> 1121

gaattcgcg cgcgctcgac gggggttccc cctgctgagg agagaccagg tggaccccag 60
 ctgcctgtca ccttcctatc gggacttget gtcaaaccct aggatagtct cataaagggg 120
 aggctggggc agcctgctgc tgtctgcttc aggaccaggc agagagttag gctgggggtt 180
 ctacacacctt actccaccgg gcacatccca acctgcactg gggcccaccc gagcgcttgt 240
 tctggtctca gccgctccct tggcagctgc agccccatg cagaagaggc tcccaggccc 300
 aagctctgtg tgaccagag aaataatgat gcactcgag 339

<210> 1122

<211> 168

<212> DNA

<213> Homo sapiens

<400> 1122

gaattcgcg cgcgctcgac ccatacccag cctgtttaat tctttataat tcacttctgt 60
 tgtgaaaaca gcattttata ctttaagctta atgattgcaa cagtcaaaat tatttatatt 120
 ttaaacctca ctatcattt aggaattatt ttcccgcaag gactcgag 168

<210> 1123

<211> 202

<212> DNA

<213> Homo sapiens

<400> 1123

gaattcgcg cgcgctcgac attcatctag catggaaggg agtgaaacag gttctcgga 60
 gggttcggat gttgcctgca ctgaaggcat ttgtaatcat gatgaacacg gtgatgactc 120
 ttgtgttcat cactgtgaag acaaagagga tgatggtgat agttgtgttg aatgttgggc 180
 aaattctgaa gcagaactcg ag 202

<210> 1124

<211> 172

<212> DNA

<213> Homo sapiens

<400> 1124

gaattcgcg cgcgctcgac cattattgta aataaaacct aatattttta actatatata 60
 tctttttaat tagattacac caccaccttc actgtcagat ccacttaaag agctttttcg 120
 acaacaggaa gttgtaagga tgaaactacg ttgcaacac agcatactcg ag 172

<210> 1125

<211> 164

<212> DNA

<213> Homo sapiens

<400> 1125

gaattcgcg cgcgctcgac cgattgaatt ctagacctgc ctaggcacag atgctaattgc 60
aggcactgca ggtaagctgg gcttggtatc cttccctggc ttcagaaaga agccaacaag 120
gagcgttttg cagaatgaaa cctttgtttc cacaagcact cgag 164

<210> 1126

<211> 563

<212> DNA

<213> Homo sapiens

<400> 1126

gaattcgcg cgcgctcgac atttgggtcat tgggaattac tgctattgaa ctagccaagg 60
gagagccacc taactccgat atgcatccaa tgagagttct gtttcttatt cccaaaaaca 120
atcctccaac tcttggttga gactttacta agtcttttaa ggagtttatt gatgcttgcc 180
tgaacaaaga tccatcattt cgtcctacag caaaagaact tctgaaacac aaattcattg 240
taaaaaattc aaagaagact tcttatctga ctgaactgat agatcgtttt aagagatgga 300
aggcagaagg acacagtgat gatgaatctg attccgaggg ctctgattcg gaatctacca 360
gcagggaaaa caatactcat cctgaatgga gctttaccac cgtacgaaag aagcctgac 420
caaagaaagt acagaatggg gcagagcaag atcttgtgca aaccctgagt tgtttgtcta 480
tgataatcac acctgcattt gctgaactta aacagcagga cgagaataac gctagcagga 540
atcaggcgat tgaagaactc gag 563

<210> 1127

<211> 217

<212> DNA

<213> Homo sapiens

<400> 1127

gaattcgcg cgcgctcgac ctcttagctg agcaggcgag agcatcatgg ataccgactt 60
atatgatgag tttgggaatt atattggacc agagcttgat tctgatgaag atgatgatga 120
attgggtaga gagaccaaag atcttgatga gatggatgat gatgacgacg acgatgacgt 180
aggagatcat gacgatgacc accctgggaa actcgag 217

<210> 1128

<211> 222

<212> DNA

<213> Homo sapiens

<400> 1128

gaattcgcg cgcgctcgac gaaaaccgct acattgtcct ggccaaggac ttcgagaaaag 60
catacaagac tgtcatcaag aaggacgagc aggagcatga gttttacaag tgaccttcc 120
cttccctcca ccacaccact caggggctgg ggcttctctc gcacccccag cacctctgtc 180
ccaaaacctc attccctttt ttcttttacc agagctctcg ag 222

<210> 1129

<211> 185

<212> DNA

<213> Homo sapiens

<400> 1129

gaattcgcg cgcgctcgac ggctgcagac agacaaacac ctgagctgtt ctgaatacct 60
tcagggttct ggctccctg agcaagtga gaaattttta cttcaagga tcagggtttt 120
tctgtttgtt tgttttttta cacacatata tgtgaacaaa gagtatgcgt ttgtactggc 180
tcgag 185

<210> 1130

<211> 167

<212> DNA

<213> Homo sapiens

<400> 1130

```

gaattcgcgg ccgcgctcgac cgtgtgagtg tgtgtttgta tacgtctggc aattaaagct 60
ttgtcttctg gaacttagtg aattcttttc tctttttcct ccagaagtat ttgttacaag 120
atttgtaa at aagagctcta cttagtttgt ttaccatgaa cctcgag 167

```

<210> 1131

<211> 218

<212> DNA

<213> Homo sapiens

<400> 1131

```

gaattcgcgg ccgcgctcgac cttttgcttt tcttctctta caattctact ctctttttcc 60
tgtctctttt ccaatctatc ctcatcttct cctctgcct cctctcttat cctatactta 120
tggtgctca acttctgtct attctctttt cctctctctt tcccacctgc ctgttcatcc 180
tattttctct tcttgccgct ctatccccac cgctcgag 218

```

<210> 1132

<211> 354

<212> DNA

<213> Homo sapiens

<400> 1132

```

gaattcgcgg ccgcgctcgac cttttgagtg ttttgttttc tattttattt ttctgttttg 60
tgtgtctgca tgggtgtttt cgggcagtggt cttctgccat catcaccaca tgtttctctg 120
ctgcccactg tcttgagggt ggcgctcgtg gaagccctgc ttcttgccgt ttgcgggacg 180
agtcccgccc tcttttttcc tgtccccatc ggtagtctgc gtgcacgtgt tttccacagt 240
aaaaccgtgt tgtgtaactc tttccagcaa agtaacaatc cgccattaca aaggtcgtcc 300
tctttgatcc agttaacgag tcagaactct tctcccaatc agcagaacct cgag 354

```

<210> 1133

<211> 464

<212> DNA

<213> Homo sapiens

<400> 1133

```

gaattcgcgg ccgcgctcgac agacttgta ctggaataga agaactacgt actaagctga 60
tacaataga agctgaaaat tctgatctga aggttaacat ggctcacaga actagtcagt 120
ttcagctgat tcaagaggag ctgctagaga aagcttcaaa ctccagcaaa ctggaaagtg 180
aaatgacaaa gaaatgttct caacttttaa ctcttgagaa acagctggaa gaaaagatag 240
ttgcttattc ctctattgct gcaaaaaatg cagaactaga acaggagctt atggaaaaga 300
atgaaaagat aaggagtcta gaaaccaata ttaatacaga gcatgagaaa atttgtttag 360
cctttgaaaa agcaaagaaa attcacttgg aacagcataa agaaatggaa aagcagattg 420
aaagacttga agctcaacta gagaaaaagg accaacagct cgag 464

```

<210> 1134

<211> 159

<212> DNA

<213> Homo sapiens

<400> 1134

```

gaattcgcgg ccgcgctcgac gttgggttat ttgtctcatt ataagtttta ggaattgttt 60
atatattcta gatatatgtt ccgtatttga tatatgattt gcaaattgtt ttctgcattc 120
tttgggttat cttttcactt tcttggtagt gaactcgag 159

```

<210> 1135

<211> 419

<212> DNA

<213> Homo sapiens

<400> 1135

```
gaattcgcg cgcgctcgac aaggaatctg agaaaaaggg gttgattgaa agaattctata 60
tggtacagga tattgtttca actgttcaaa acgtcttgga ggaaatagct tcttttgagg 120
aaaggattaa gaacacattt aactggacgg tccccctcct ttcattctctg gcctgtttga 180
ttctggcagc agccaccatc atttgtatt tcattccact gcggtacatc attttaatct 240
gggggcataa taaatttact aagaagcttc gaaatcccta ttccatcgac aataatgagc 300
tactagactt cctctctagg gtaccgtctg atgttcaaaa ggtgcagtat gcagaattga 360
aactctgcag cagccacagc cccctgcgga agaagcgag cgctccaggg cacctcgag 419
```

<210> 1136

<211> 238

<212> DNA

<213> Homo sapiens

<400> 1136

```
gaattcgcg cgcgctcgac gcatatcagg agagaagttg ggagtctttc aggtataccc 60
cgtttccatg tttttggtag taaaagggat gctttgcaaa gcccttgatc agtttcccag 120
cattttgggt tggatgactt tgacaagtgt tgggaagtgg aggggtgttg tggtgatgg 180
tgtctgtttc ccccgagccc gcctgaactg taagcactgt gggaagcagg ctctcgag 238
```

<210> 1137

<211> 220

<212> DNA

<213> Homo sapiens

<400> 1137

```
gaattcgcg cgcgctcgac tgggcttcaa cttgatgttt ttctgctgcc agaagttcca 60
tatattctgt ttcttccttt attgcagcct ctctcagggc ctccaggcgc tgccggctgc 120
tctccttcat gtacacgaca tctttgtaat cccctgcag ggctctctgc agtccgtaga 180
cagcttgtaa aacggaattt tcacttccat tcagctcgag 220
```

<210> 1138

<211> 326

<212> DNA

<213> Homo sapiens

<400> 1138

```
gaattcgcg cgcgctcgac caaggaaatg tgagccccag gctgcagaag gaagagtcag 60
tgaatggctg cgggtgtgaca acatgcacca ccagtggctt ctgctggcgc catgcttttg 120
ggtgatcttc atgttcatgg tggctagcaa gtcatcacg ttgaccttta aagaccaga 180
tgtgtacagt gccaaacagg agtttctgtt cctgacaacc atgccggaag tgaggaagtt 240
gccagaagag aagcacattc ctgaggaact gaagccaact gggaaggagc ttccagacag 300
ccagctcggt cagccgagtt ctcgag 326
```

<210> 1139

<211> 256

<212> DNA

<213> Homo sapiens

<400> 1139

```
gaattcgcg cgcgctcgac ctggaaaatc ccaaaatatt tggaaaccat atagcacact 60
tacttctaaa attgtggtag aatacatata acatagaaat tattgttcta accattttta 120
aatgtacaat tcagtggctc taagcacatt cacattgttc tgtttatcta cagaacgctt 180
ttcatcttgc aaaactgaaa ctctgtattc attaaacact aactcccat tttctccttc 240
ccccatatec ctcgag 256
```

<210> 1140

<211> 320

<212> DNA

<213> Homo sapiens

<400> 1140

```

gaattcgcg cgcgctcgac gactgatgtt ggagtctatg ctcatctgga tgtacttcca 60
gtcaaaactca atgccccggg ctccgaccca taggggaatg cagcgggaca taataagctc 120
agcagtggcc cagcccaggg cagcaaccat gatcttgtag tctcccttgc cggcattccg 180
ggacatgaca aggttttagac ctatcagggtc tgccacatcc acgctggcct tcatgaactc 240
cccaatgaag tcatagatgc cgccttccca ggtgggaaag aaagtggcca agaacagcat 300
cttgagaggg cggactcgag

```

320

<210> 1141

<211> 273

<212> DNA

<213> Homo sapiens

<400> 1141

```

gaattcgcg cgcgctcgac ggctttctct gaaatgccaa agccaccga ttattcagag 60
ctgagtgaact ctttaacgct tgccgtggga acaggaagat ttccgggacc attgcacaga 120
gcatggagaa tgatgaactt ccgtcagcgg atgggatgga ttggagtggg attgtatttg 180
ttagccagtg cagcagcatt ttactatgtt ttgaaatca gtgagactta caacaggctg 240
gccttggaac acattcaaca gcacccctc gag

```

273

<210> 1142

<211> 186

<212> DNA

<213> Homo sapiens

<400> 1142

```

gaattcgcg cgcgctcgac tcgaggagtgc ccctaatacga cgaggacccc caggcggcgt 60
tagaggagct gactaaggct ttggaacaga aaccagatga tgcacagtat tattgtcaaa 120
gagcttattg tcacattctt cttgggaatt actgtgttgc tgttgctgat gcaaagagac 180
ctcgag

```

186

<210> 1143

<211> 289

<212> DNA

<213> Homo sapiens

<400> 1143

```

gaattcgcg cgcgctcgac tgccctcagca cctttgcact ggttggtccc ttagtctgag 60
atccactttt acccattgtt cactttctca ttccattttg gtttctctca aacattgtct 120
cattatagaa accttgcttg acaactctaa catgtcagcc tctctgcgtc tcttaggacc 180
tttctctctt cttacctgct ttttctctt cccactatg atttggtatc aaaatatttg 240
tgcattttgc aattcagtggt ttacagcctg tcaagccacc caactcgag

```

289

<210> 1144

<211> 534

<212> DNA

<213> Homo sapiens

<400> 1144

```

gaattcgcg cgcgctcgac gctgccttta ttctctgagc cttgactctg tcccaggcct 60
gccctggagc gctgcacgc tcagctccct gaggtaggtc cggagggaga cccccgctg 120
cccccgccc tcggccaggga tacctctcac ctcatgtccc ctccctcaga ccccacagc 180
cctggatgcc ccatagcagc cctgccacgg ctggcagaac tgccctcacc ctccaccaac 240
ccccaagaca ggaggtcga cgcggccgag aattcgcggc cgcgctcgagc tggagaagga 300
cgtgccgtgc cgtgggttc tgagccggag tggcgggtgg gtgggatgga ggcgacctg 360
gagcagcact tgaagacac aatgaagaat ccctccattg ttggagtccct gtgcacagat 420
tcacaaggac ttaatctggg ttgccgcggg accctgtcag atgagcatgc tggagtgata 480

```

tctgttctag cccagcaagc agctaagcta acctctgacc ccactgaact cgag 534

<210> 1145

<211> 149

<212> DNA

<213> Homo sapiens

<400> 1145

gaattcgcg cgcgctcgac cttaaaccgtc gattgaattc tagacctgcc tcgagaacca 60
ccccccacct tttggcctct tcattttattc cttaaagtgt attcctcaga cctccatttt 120
ttttttctct cttaatcaca ccactcgag 149

<210> 1146

<211> 138

<212> DNA

<213> Homo sapiens

<400> 1146

gaattcgcg cgcgctcgac tctagacctg cctcgcggaa cttcagtttg taaacaggct 60
ctggtttcac aaggctctaag aactccaggt gaaattcata gacattgtct cctttggcac 120
catgtccttg ggctcgag 138

<210> 1147

<211> 246

<212> DNA

<213> Homo sapiens

<400> 1147

gaattcgcg cgcgctcgac gttttgtctg ctttaaaatt ctgtattata ctgcatgtac 60
tcttttatgg cgtgcttttt tccttgttat tgtatcatga acactagttt gtttttctctg 120
tttttctttc cggtctgttc ctggacattt ttattttcag gatttggttg tatcatatca 180
gaaagaaacc tgtactcaat ggcagttact cctcatttct catcctcttt cccccgaac 240
ctcgag 246

<210> 1148

<211> 190

<212> DNA

<213> Homo sapiens

<400> 1148

gaattcgcg cgcgctcgac gttcactgag cacttacata gattaacagt tacaagtttc 60
cataaatcag ttagaatatg actagcttca gggaaggaa tttcaacaac tgcaatcttt 120
gattgtttta ctgtgggaac ttgcagtgat ataattgaca acattattta acaataatag 180
gtatctcgag 190

<210> 1149

<211> 361

<212> DNA

<213> Homo sapiens

<400> 1149

gaattcgcg cgcgctcgac tgattatagc aaattcatac aaaccagacc taaaagaaaa 60
ctcagaaagc aacatggcaa tggaaaaaga aattggaaga ccagaggcac aggaggaaga 120
ggcagatggg gaagatgacg tagatggagt agaggaggca gaggaagagg aggcagggga 180
cgagggagtc gaggaagagg tggagggtggc actaggggga ggggaagagg gagaggagga 240
agaggtgctt ctagaggagc taccagagcc aaacgagcac gtattgcaga tgatgaattt 300
gataccatgt tttcaggacg tttcagtaga ctgcctcgaa ttaaaacaag aaaacctcga 360
g 361

<210> 1150

<211> 297

<212> DNA

<213> Homo sapiens

<400> 1150

```

gaattcgcgg ccgcgtcgac ccactgcgca cagcccatTT atattaaagt gaagttgatt 60
atagtttcat atgtcttaag gaccattaaa aaaatttttt tggTgaatta tttattcata 120
ttttgcttat ttctcaacag gatatttgTT tttttccttc aattttttaa agttcttcaa 180
gtattagggg taatgtcatt atctgtgaag tgttttgcAT atatttgctc agcttgTTTT 240
ttgactttgc ttgttttttg tttttattct tttttgccac acaagccaga tctcgag 297

```

<210> 1151

<211> 346

<212> DNA

<213> Homo sapiens

<400> 1151

```

gaattcgcgg ccgcgtcgac caagtatgTT ctcagaagct atacactcat tatctgatac 60
ttgtaaatcag ggtttactag cattgggcAT cagtaagtct gttcaaacac cagatccttc 120
tcatccgtac ggattttcaa atatgcgcta tatttcttcg ctaattagtg gtgttggtat 180
tttcatgatg ggtgcaggac tatcttggtA ccatggagtc atgggattgc ttcatactca 240
accaatagaa tcccttctat gggcatattg tatttttagca ggatcattag tatctgaagg 300
agcaacactt cttgttgctg taaatgaact tccaggaaag ctcgag 346

```

<210> 1152

<211> 256

<212> DNA

<213> Homo sapiens

<400> 1152

```

gaattcgcgg ccgcgtcgac ctgaatgccc catgcgcacc ccacagctcg cgtccttgca 60
agtgttcttt ctggtgttcc ccgatggcgt ccggcctcag cctcttct cccatcagg 120
ggcagtgcgc acgtcttttg agctgcagcg agggacggat ggcggaacct tccagtcctc 180
ttcagaggcg actgcaactc gcccggcctg gcctggactc cctacagtgg tccctactct 240
cgtgaactcc ctcgag 256

```

<210> 1153

<211> 181

<212> DNA

<213> Homo sapiens

<400> 1153

```

gaattcgcgg ccgcgtcgac tagaagtga cagagaatta cacaagtgtg actatacaaa 60
ttgtaaaaca gatactataa tatttccttt tatttttagt ttatttagct ttattacaga 120
tttctatttt tgtcaaaact tcatgggttc tttcaagatc ttttttgcca aaactactga 180
g 181

```

<210> 1154

<211> 304

<212> DNA

<213> Homo sapiens

<400> 1154

```

gaattcgcgg ccgcgtcgac agaatatatt attcccacag gaaaaactca gaaaagggtg 60
gtaaaaatcct cagaaggggg agcagttgat tcagtaagac tgcgacaatt taatactggt 120
acgcttgctt tgatacctga ctaaatgtga ctgagtgcAA caagcattta agaaaatttt 180
tagacagtgt tttgttttaga attcagggat catgcattct ttaatgggtc tgtttgtttt 240
ttatttcttt tctacaaaga aaacaagtgt tgcctacaaa agtgactgct cacaatacct 300
cgag 304

```

<210> 1155

<211> 194

<212> DNA

<213> Homo sapiens

<400> 1155

gaattcgcg cgcgctcgac attggatttt ggtccatagt tggaggetgt gttgttggaa 60
tagctatggc aaggtttgca gattttatca ggggtatgct gaaactaatt cttctcctcc 120
tgttttcggg agctacactg tcatccacgt gggtcaccct gacctgtttg aacagcatca 180
cacaccccct cgag 194

<210> 1156

<211> 537

<212> DNA

<213> Homo sapiens

<400> 1156

gaattcgcg cgcgctcgac gcttagaggt catctttcaa ggaggcatta aatatcaatt 60
ataaattatt aagtcagata aatatgcctg accttttcac agttgaaaaa atacattttt 120
tccccctctat caaatgccaa gtttttagtg gaaatgctaa tggcagtggg aaaggttgcc 180
tcacttttcag agagactctc gctgtctgca cctttttaat aattgctctt cctggcaagg 240
ctgccacttc cctgcctccc cagctggcag tggggcaacc caggcctgtt tccagctacc 300
tgcaaagcca gacctagacc tgccgtagct gttgtcccat gcctaattct agttacagga 360
agccatccct gtaccctggg tccattcaca ggaatgggtt ccagaggagg ctgatagaag 420
ggtttgaaat gactggctgg atcccttccct gctcagacac agtggtagct ggagagcagg 480
cagagatggt agaattgcag gtttgaccac ctgtcgtgac cccagaagct actcgag 537

<210> 1157

<211> 580

<212> DNA

<213> Homo sapiens

<400> 1157

gaattcgcg cgcgctcgac cactttttaa aaacaaaaaa agacaagaga gatgaaaacg 60
tttgattatt ttctcagtgat atttttgtaa aaaatatata aaggggggtg taatcggtgt 120
aaatcgctgt ttggatttcc tgattttata acagggcgcg tggttaatat ctcacacagt 180
ttaaaaaaatc agcccctaatt ttctccatgt ttacacttca atctgcaggc ttcttaaaagt 240
gacagtatcc cttaacctgc caccagtgtc caccctccgg cccccgtctt gtaaaaaggg 300
gaggagaatt agccaaacac tgaagctttt taagaaaaac aaagttttaa acgaaatact 360
gctctgtcca gaggttttaa aactgggtgca attacagcaa aaagggattc tgtagcttta 420
acttgtaaac cacatctttt ttgcactttt ttataagca aaaacgtgcc gtttaaacca 480
ctggatctat ctaaatgccg atttgagttc gcgacactat gtactgcgtt tttcattctt 540
gtatttgact atttaatect ttctacttgt cgccctcgag 580

<210> 1158

<211> 397

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (27)

<400> 1158

gaattcgcg cgcgctcgac ctgccangtg gatgagaagt gattacctgt ggaaattcat 60
agtgttatct ttttatagca ttcatttaca aaggttggat ttatgtaggc cttttccttt 120
tgttctttat tgcagatatt caagagaagc ttatgtggag ttagtccacc atattagaga 180
atctattcca ggtgtgagcc tcagcagcga tttcattgct ggctttttgt gtgagacgga 240
ggaagatcac gtccagacag tctcttttgc ccgggaagtt cagtacaaca tgggcttcct 300
ctttgcctac agcatgagac agaagacacg ggcatatcat aggtgaagg atgatgtccc 360
ggaagaggta aaattaaggc gttcggagga actcgag 397

<210> 1159
 <211> 198
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (30)

<400> 1159
 gaattcgcgg ccgcgtcgac agattatatn acaatttata ttcaattcta gattctaagt 60
 ttcttttggg caagaatatt tttttccct gtgtcaattc agggactcca gaaacagaa 120
 gctaagaaca gaagcaagtg ctggagattt actgagaggt tacacttgtg gaagatgaag 180
 tgtagcggca tctcgag 198

<210> 1160
 <211> 186
 <212> DNA
 <213> Homo sapiens

<400> 1160
 gaattcgcgg ccgcgtcgac attaaagggtg aagttctgca aatgggagag tgttcacagt 60
 agatagctca gattgattga acacatttga ggaagagact cctgcatgag ataccagcat 120
 ttttacaat actttttatg tacattcttt atttgtcat tttgtcaacc ctctcccaa 180
 ctcgag 186

<210> 1161
 <211> 298
 <212> DNA
 <213> Homo sapiens

<400> 1161
 gaattcgcgg ccgcgtcgac gcttggcaag gagactaggt ctagggggac cacagtgggg 60
 caggctgcat ggaaaatatt cgcagggtcc cccaggcaga acagccacgc tccaggccag 120
 gctgtcccta ctgcctggtg gagggggaac ttgacctctg ggagggcgcc gctcttgcatt 180
 agctgagcga gcccggtgctg gctggtctgt gtggaaggag gaaggcaggg agaggtagaa 240
 ggggtggagg agtcaggagg aataggccgc agcagccctg gaaatgatgc aactcgag 298

<210> 1162
 <211> 224
 <212> DNA
 <213> Homo sapiens

<400> 1162
 gaattcgcgg ccgcgtcgac gccagttata gactgtccag catccaagac gtttcggtta 60
 tgcgggttcc tcagatcgcc tctgacttgt taccacaaca aatcattttg atttcagtgc 120
 ctgttgggga cttgatttct tctcagtttt gtttgtttgt ttgtttcctt aatctggctc 180
 atttgaaatt tcttctccct ctcaaccatc ccactaatct cgag 224

<210> 1163
 <211> 314
 <212> DNA
 <213> Homo sapiens

<400> 1163
 gaattcgcgg ccgcgtcgac cccatggcca cctgttcta tgagctcacc agctccaccc 60
 tggagatatt aacagtgaac actgtcaagc agacacctaa ccacatcccc tcaacgatca 120
 tggcaaccac ccagctccca gtagaaacca ctgttcttga gatccaggat agcttcccat 180
 acctgtgtc tgaagacttc tttggacagg aaggccccgg gccaggtgca agtgaggagc 240
 ttcattccac cttggagtcg tgtgtggggg acggatgtcc tggcctcagc agaggccctg 300

tgatcgccct cgag

314

<210> 1164

<211> 219

<212> DNA

<213> Homo sapiens

<400> 1164

gaattcgcg cgcgctcgac gtaataaatt attcactggt tcttttggtg actgtgattt 60
aaaaaaaagaa aaaagaaaaa aaagctttat acgttttagg ttgtgctttt gtaatagatg 120
aaaaaagggtg cgcttaaaaa gaaaatgtat gtttttttcc ccctttggat tttatttatg 180
ctggattggg gaaagttgca gaatgagcgc caactcgag 219

<210> 1165

<211> 174

<212> DNA

<213> Homo sapiens

<400> 1165

gaattcgcg cgcgctcgac atccctcagt gaacatttgg gttgcttcca ctttttaact 60
tgtgtagctt tttttggggg gatatttttg ctctcaaaag gacaaaggaa aaaattaggt 120
tcagttgcta ggattactca catgagggta ggcattgggca ggaccatact cgag 174

<210> 1166

<211> 221

<212> DNA

<213> Homo sapiens

<400> 1166

gaattcgcg cgcgctcgac gatacttatt gctgctcttg caccaatatg ctttccgaag 60
tgctgttgtt tctctctcaa tatttgacac tttgtgtgta tatccaacta atgctggccc 120
agaatgcaaa taatagagca gcacaccttg aagagtttca ttaccaaaca aaagaagacc 180
aggagatcct gcatagcctt cacagagagt ccacctcga g 221

<210> 1167

<211> 118

<212> DNA

<213> Homo sapiens

<400> 1167

gaattcgcg cgcgctcgac tgggttttca catgctatct caggcttgcc ttttttatct 60
gtattttctt gtagcagttt gtcgacctga gaaatggcct cttcccagca atctcgag 118

<210> 1168

<211> 248

<212> DNA

<213> Homo sapiens

<400> 1168

gaattcaaca agaggcagtt ctttactaat caacatataa cttgaatacc tgggcaaaga 60
caaattattc aggtggacaa agaaataaat gaataaaagt gggattcaaa tttttgattt 120
cataagttcg gaaataagta atcaagaaac ctaactaata aaccacacaa tcaactgattt 180
gcaaacttga acaccaaaga aaaagatatt ttatggtaac tatattcatt ttttttgttc 240
tccctata 248

<210> 1169

<211> 195

<212> DNA

<213> Homo sapiens

<400> 1169
gaattcgcgg ccgcgtcgac cagcctggaa ggtaatgcat gtccatggta cacaaattca 60
caagggtttgt aaatgagaaa agacgtgagg ttccttttgt tctttacctg tggcctccct 120
gccctacacg gggactctag ggtggaatgt agcaaagccc atccaccagc catgtactac 180
cccccccccgc tcgag 195

<210> 1170
<211> 222
<212> DNA
<213> Homo sapiens

<400> 1170
gaattcgcgg ccgcgtcgac gtggtggaca gctgtagtga taatgttgat agtaggtata 60
ataacaccag tgttttattt gttgtattat gaaattttag ctaagggtga tgtagtcat 120
cattcaacag tggactcttc acattttacat tcaaaaatca caccctcatc acagcagaga 180
gaaatggaaa atggaattgt gccaaactaaa ggaatactcg ag 222

<210> 1171
<211> 314
<212> DNA
<213> Homo sapiens

<400> 1171
gaattcgcgg ccgcgtcgac tagaagaaac ccagaaattc agtcttttct gttttatttg 60
cagtggtctag catgttctct ggttcaacta aagttcgaag caggcccata agctggactg 120
ctcctccaag ttcaggatct gtatcacaaa tcataatgttc tataatgagg ttgatgagca 180
aaatatcctt gctggttatt ttttgcctcg ttaacttctt acttacatca tcattctgtt 240
gtgcctcctg catgacaaac tctcgtacca tggatggatt atattcaacc aagtatgaga 300
atatatcact cgag 314

<210> 1172
<211> 177
<212> DNA
<213> Homo sapiens

<400> 1172
ggaattcgcg gccgcgtcga cgcatattt aaccagagta cttgttttga atttttttatc 60
tgtgaaaata ttttaaagct cttacaaaac ttaaattttt aaaaaatcag ctcaaaaatt 120
ttttccatgt tgttgggcat accactgctg tctctgcttt cggtttccca actcgag 177

<210> 1173
<211> 232
<212> DNA
<213> Homo sapiens

<400> 1173
gaattcgcgg ccgcgtcgac gtttgagaaa cctgtgtgaa aatccatact ttagcaatct 60
aaggcaaaac atgaaagacc ttatcttact tttggccaca gtagcttcca gtgtgccgaa 120
ctttaaacac ttcggatttt accgtagcaa tccagaacag attaatgaaa ttcacaatca 180
aagtttgcca caggaaattg caaggcactg catggttcag gccagctcg ag 232

<210> 1174
<211> 252
<212> DNA
<213> Homo sapiens

<400> 1174
gaattcgcgg ccgcgtcgac ccagactata tagttcaaag agaattccta tttttcgta 60
ggtatgcaac aaaacaatgc agtttgattt atatcgtatt ttgtattgta ttatatgatg 120
ggtctcactc tgttaccacg tctagagtgc agtggcacga tcacagctca ctgcagcctt 180

gacctgccag tctcaagcaa tctctctacc tcagcctccc aagtagctga gaccacaggc 240
actcaactcg ag 252

<210> 1175
<211> 464
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (13)..(14)

<400> 1175
gaattcgcg ccnngtcgac gcatatactg ccatgtcaga ttcctactta cccagttact 60
acagtccttc cattggcttc tcctattctt tgggtgaagc tgcttggctt acgggggggtg 120
acacagccat gccctactta acttcttatg gacagctgag caacggagag cccacttcc 180
taccagatgc aatgttttgg caaccaggag ccctaggtag cactccattt cttggtcagc 240
atgggttttaa tttctttccc agtgggattg acttctcagc atggggaaat aacagttctc 300
aggagacagc tactcagagc tctggatata gtagcaatta tgcttatgca cctagctcct 360
taggtggagc catgattgat ggacagtcag cttttgccaa tgagaccctc aataaggctc 420
ctggcatgaa tactatagac caagggatgg cagcaacact cgag 464

<210> 1176
<211> 170
<212> DNA
<213> Homo sapiens

<400> 1176
gaattcgcg cgcgctcgac ctttgggtat catatcctga atatatgaag ttcattaagc 60
actttctcct catctccctt agaaggtcct ctttctccca ggggtgggggt gggaagagc 120
tgacaggaca ccctaagtcc atcctgattt tgcagaacct aaggctcgag 170

<210> 1177
<211> 207
<212> DNA
<213> Homo sapiens

<400> 1177
gaattcgcg cgcgctcgac gtgattgtgt tttttaaag ataagtaatt tgatgaactg 60
ttcttttgca gtcagaaaac actcacaaaa agacaaaaaa agttccacag tattatattt 120
catgtcagtt caggcctaaa atccttttga aataagatgt ttataggctg gtcacaatta 180
acaatgttat tattggcaac actcgag 207

<210> 1178
<211> 163
<212> DNA
<213> Homo sapiens

<400> 1178
gaattcgcg cgcgctcgac attgaattct agacttgctt cttcctcctc ctctaccctc 60
acttctaatg actaggtaca tttctacctt gctttcaatt ctaccttgct ggtgttttcc 120
attagtcatt tttttcccat tgtctcttac cacacaactc gag 163

<210> 1179
<211> 313
<212> DNA
<213> Homo sapiens

<400> 1179
gaattcgcg cgcgctcgac caaagatgtg tacaaaattt tatcttttca gccctcaaat 60

```

attgattttg aacattatatt tgcaaagagt actaagtggg ttggttagttg agatagagga 120
atatgcagct tttgactatc ttctctttcc cgtcagtagc agctttcatg atacaatttc 180
ctcttatcac tttggtcaag aggtggggca gaaaattttg agttacagta tcattcgaag 240
agaatttatt tctgcctttc atgttatagc ccctaaggga tccaggaccc gaaaggccag 300
cttctccctc gag 313

```

<210> 1180

<211> 227

<212> DNA

<213> Homo sapiens

<400> 1180

```

gaattcgcgg ccgctgcgac ggcatagata agtttatgga agacctaaaa gatatgctgg 60
gctttgctcc cagcagatat tactactata tgtggaaata tatttctcct ctaatgctat 120
tatcattgct aatagctagt gttgtgaata tgggattaag tcctcctggc tataacgcat 180
ggattgaaga taaggcatct gaagaatttc tgagctatcc actcgag 227

```

<210> 1181

<211> 253

<212> DNA

<213> Homo sapiens

<400> 1181

```

gaattcgcgg ccgctgcgac atttgccaca aacgctgtta actggactca cacatactat 60
gtgtacctta atgatttatt tactctatgg acagttatta gaacatctgg tatgtggtca 120
cccgctcgga gccaaaggaga ttaggcgctg ggggctgcag tgtagcctt cccgggagtg 180
cacggtccag ccagggaccg ggggtcccctg ggagctgtgc ttcagaagct tactgactga 240
tgaaagcctc gag 253

```

<210> 1182

<211> 153

<212> DNA

<213> Homo sapiens

<400> 1182

```

gaattcgcgg ccgctgcgac cttctatata actgaaatag ttccttgaac atttgataaa 60
gttttcctta gaaagaaact ggatttggcg cttcattagt aatagttaac tgatcacatg 120
ctaatttttc cctgttctct gtatttactc gag 153

```

<210> 1183

<211> 158

<212> DNA

<213> Homo sapiens

<400> 1183

```

gaattcgcgg ccgctgcgac caggcatcca caaaagaaga ccaagctttg tccaaagagg 60
aagagatgga gactgagtc gatgcagagg tagaatgtga cctgagcaat atggaaatca 120
ctgaagagct ccgccagtac ttgcaaagt cgctcgag 158

```

<210> 1184

<211> 249

<212> DNA

<213> Homo sapiens

<400> 1184

```

gaattcgcgg ccgctgcgac gtccaagtgc tccattatca tttgttacag gctattcttc 60
tactgaattg cttttgctcc ttggccaaaa gtcagataga tgtattttgtg tgggttggtt 120
gctgggtttt tgaattcttt tctgttgatc tctgtgtctg ttctctgtc tataccacac 180
tgtcttggtt actgtagctc tagtgatagg tcttcacatc aagcaagaat gtcactgcc 240
ccctcgag 249

```

<210> 1185
 <211> 151
 <212> DNA
 <213> Homo sapiens

<400> 1185
 gaattcgcgg ccgcgtcgac cctaaaccgt cgattgaatt ctagacctgc ctgaggtga 60
 taacctatc tctacaaaa aaagaaaaaa aaaaacaaaa aaaaacttag ctagggtgtg 120
 tggcatgcgc ctgtggtccc ggctactcga g 151

<210> 1186
 <211> 267
 <212> DNA
 <213> Homo sapiens

<400> 1186
 gaattcgcgg ccgcgtcgac gtttatttca cagcactgag gaggaccagc atgcattctt 60
 ctcttaacac aagtccgaat caacaacctg aactaactt ggctcatgtt ggagctcaca 120
 gttttgtac agaaaatatt attgggggat ctgaacaatg ttttgaaacag cttcagccag 180
 aatattcttc acaggaggag agccagcatg ctgatctacc aagtattttt agcattgaag 240
 caagagattc ttcccaaggc actcgag 267

<210> 1187
 <211> 230
 <212> DNA
 <213> Homo sapiens

<400> 1187
 gaattcgcgg ccgcgtcgac cgatgacgac gaggaggaga agctcaccac agtgaggcca 60
 ggggggttcg tggccgtgtt ctgtcccgat aggccttttc gccagacggg gcagctgtcg 120
 tgctgtctca gccaggcac gatgcagccg tcgtggaaca ggtggttga gggcagctgc 180
 cgcacacgct caccacgagc gtagtcgtcc ttgcacacag ggcactcgag 230

<210> 1188
 <211> 184
 <212> DNA
 <213> Homo sapiens

<400> 1188
 gaattcgtgg ccgcgtcgac cttgtagaga gtgacaaggt attgtttgtt tccctatgtg 60
 ctgttcgagc agtattttta ccaacttgta ttacagatgt tacagttcca tgttaggaag 120
 tcagaaaaga cttgtgtttg tctttgttct gctgatgtgg agtcatgttt ggtggggtct 180
 cgag 184

<210> 1189
 <211> 201
 <212> DNA
 <213> Homo sapiens

<400> 1189
 gaattcgcgg ccgcgtcgac ggttttagtcc tcaagaagtc ttggctatta aggggcactt 60
 atccatacaa cctctacttt ttctaggcac taaaaggggg aaaaggctta atagccaaaa 120
 tagttatcaa aagaccctaa agctgggggc ctgtacacca tgaaaggatt actttcattc 180
 tcatgtaagg gactactcga g 201

<210> 1190
 <211> 228
 <212> DNA
 <213> Homo sapiens

<400> 1190

gaattcgcgg ccgcgtcgac cttggagaac agacttaata tgatccagtc ttcctatttt 60
 tttttatttt tggtagacat gggggtcttg tctctctgtg ttgcacaccc aggtctgtct 120
 ccagctcctg gtgtgtccag aattggttcc ttccagtggg ttcttgggtct cgtgacttt 180
 aagaataaag ccgcggaccc tcgaagttag tgttacagtt ctctcgag 228

<210> 1191

<211> 276

<212> DNA

<213> Homo sapiens

<400> 1191

gaattcgcgg ccgcgtcgac cgagttgatg gggtccttgg acatatgttt tttcaaaatt 60
 tttgaagcct tttcaaatc tttgtttttg atacaaataa tgacagcagc ttccttgacc 120
 agttttctac tggattcgac cactgcttct gtcagtgtaa attccgtttt aatcatctcc 180
 agcacattga tagctgattc cagtgggttg agctcagcct ccatatcaaa ggaacagtct 240
 aaattttccc ctctttcaat ccgcgacaga ctcgag 276

<210> 1192

<211> 196

<212> DNA

<213> Homo sapiens

<400> 1192

gaattcgcgg ccgcgtcgac cagaacttta ttttagctct tttttaaaaa tgatttgcatt 60
 ggtagaaaaa cggcaggac agccagggga gggaagggcc tctagggaac tttgcacttt 120
 ctataccttt gtactatgca ctgccctatt gattctacac ccaataatga tattacttga 180
 acccatccac ctcgag 196

<210> 1193

<211> 315

<212> DNA

<213> Homo sapiens

<400> 1193

gaattcgcgg ccgcgtcgac ttctcgatc atttcaaaga tgctaaagc agatttctat 60
 gttctggaaa aaacaggact ttccattcag aactcatctc tgtttccaat actgttacat 120
 tttcatatca tggaaagccat gctgtatgcc ttattaaata aaacttttgc ccaggatggg 180
 cagcatcagg tgctgagcat gaatcgaaat gcagtgggga agcattttga actgatgatt 240
 ggtgactccc ggactagtgg aaaagagcta gtgaagcagt ttctcttcga ttctatacag 300
 aaggcggatc tcgag 315

<210> 1194

<211> 264

<212> DNA

<213> Homo sapiens

<400> 1194

gaattcgcgg ccgcgtcgac ccatcagtga aggaaccatc caaaactgct aaacagaaaa 60
 ggagaactat aattctagga agtgggtcaca aaggaaaagc tactattaga attggattgg 120
 ctacaaagaa acctgtaagt agtggcagaa aacactccct tggtaaagaa tattatgcgc 180
 ccgcacctct tccacctggt gtgtctggtt tcttgccgtg gcgtactgca gaacgtgcaa 240
 aaagacacag gggtttccct cgag 264

<210> 1195

<211> 210

<212> DNA

<213> Homo sapiens

<400> 1195

```

gaattcgcg cgcgctcgac gaggatagca ggcgtaaata cctactgtaa tacaatgtca 60
ctgtgtttcc tctgcaactgt tcccttccac ttctcatcc tctttgtgac atggaagttc 120
attgtcatag cttcagcttc agaagctgtt tgtggcattt gtaggattca aactcatgga 180
aaattccctc ctcttcccc cccactcgag                                     210

```

<210> 1196

<211> 207

<212> DNA

<213> Homo sapiens

<400> 1196

```

gaattcgcg cgcgctcgac ccccccgcca cctctgtctc caagccaatc aaccagtcac 60
caagtccat caatgctatt gctgaaattt ctcttgaatc catctacttc tttccacgtc 120
cacagccacc atcctacccc cagccttcac ctctcttttc ttgatgatgg catgacctcc 180
taccagttt cccggcaact actcgag                                     207

```

<210> 1197

<211> 272

<212> DNA

<213> Homo sapiens

<400> 1197

```

gaattcgcg cgcgctcgac cgcctccctac atttaccttc cttatatctc ccccgctctc 60
ctctccatag atctcctccc atttcccttc ccatggctcc catcttcttc ctgaaatgtc 120
tactccttca tgttccctta tgtatgtctt ccaatctttc cttccatagc tctcatcacc 180
ttcatatatt tcttccatct ttctcctccc acctgcctcg cctctgttat atacccccac 240
tctccccctt ttatatcttc tccacactcg ag                                     272

```

<210> 1198

<211> 263

<212> DNA

<213> Homo sapiens

<400> 1198

```

gaattcgcg cgcgctcgac cattgagaga gggaggaaag ttttatcatg acagaaatgc 60
tcatactctg aggatataat agagagttaa tacttgaggg tagaattaat caaacaactc 120
ttcttgatgc tggatatttt agcctaaagg aaaatataat acatgagttt agcttttaat 180
gtttcaacag cttcactgat tgtccagaag tcattgtgtg cccactttcc tcatgtgttc 240
atctattgcc agtgttcttc gag                                     263

```

<210> 1199

<211> 343

<212> DNA

<213> Homo sapiens

<400> 1199

```

gaattcgcg cgcgctcgac ctcggcggtt gagcgcgccc gacagcagct agaggcgctg 60
ctcaacaaga ctatgcgcat tcgcatgaca gatggacgga cactggctcg ctgcttcttc 120
tgcactgacc gtgactgcaa tgtcatcctg ggctcggcgc aggagtccct caagccgtcg 180
ggtcagtgcc cggggaatgc acaccgcctt ggtaatgtgg cggaacctta cgcaaggcat 240
ttccctttaa gggcctgggt gcaacccttg tttctgagg ctcgttttctg tggctcagag 300
gggcgggaact gattctggcc tactttcttg acactcactc gag                                     343

```

<210> 1200

<211> 187

<212> DNA

<213> Homo sapiens

<400> 1200

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gaattcgcg cgcgctcgac ccaagattct gttaggattt ctgtgcatat agtgtagtaa 60

```

agaagtatca ttcaggggtg aaaaacaaag agccgtttta atgatgttga gtacatttgg 120
 ctgttttata gcctttttct tccctcccc aaagaattct gtttgccctaa ctcccaaca 180
 gctcgag 187

<210> 1201
 <211> 261
 <212> DNA
 <213> Homo sapiens

<400> 1201
 gaattcgcg cgcgctcgac ctgacctttg aagatatecc tggaattccc aagcaaggca 60
 atgcaagttc ctccaccttg ctccaaggta ctgggaatgg cgttcctgcc actcaccctc 120
 accttttgc tggctcctct tgcctctctc ctgccttcca tctggggccc aacaccagcc 180
 agctgtgtag tctggccctt gctgactatt ctgcctgtgc cgcctcaggc ctcaccctca 240
 accgatacag cgcctctcga g 261

<210> 1202
 <211> 280
 <212> DNA
 <213> Homo sapiens

<400> 1202
 gaattcgcg cgcgctcgac cttgatccag cctgggtaac aaagcaagag cctgtctaaa 60
 aaaaaaaaa agccagggtta tttttgtttg ttttgttttg ttttccctt tctcagttac 120
 tcattccctt tagattgaag gattgatgca tttatttatt tatttattct tttaccaagc 180
 ctcattgact ttatgttttg agaagaggat tctgctaaat tcttgggatt attcagaggc 240
 ttatacacca acaaaagaaa aagaaagcca acaactcgag 280

<210> 1203
 <211> 155
 <212> DNA
 <213> Homo sapiens

<400> 1203
 gaattcgcg cgcgctcgac aaaaaaaaa agaagtactt cacattactg tcatcaaaa 60
 tagattccac caccagagta tttgcaactt ggaatccagg ctgctaataa ttgttttggg 120
 aggaaagcat gatagtgtta ggattcgac tcgag 155

<210> 1204
 <211> 307
 <212> DNA
 <213> Homo sapiens

<400> 1204
 gaattcgcg cgcgctcgac gttttgttat ataggtaaat ctgtgccgcg gtgggtttgct 60
 gccctatca acccatcagc taggtattaa tcgtccatct tttaaagctc actttaactt 120
 ccacttttcc atgaagcttt tctgtatctt cctcctcctt ccatectgga aaatccttgc 180
 agtttggtct gcagcatcac acctagtgtc tagccatccc tactttgtcc ctacactttt 240
 tgaattgctt accaacaact tagagaggga gctagagatt gttgctggcc attgctccaa 300
 actcgag 307

<210> 1205
 <211> 586
 <212> DNA
 <213> Homo sapiens

<400> 1205
 gaattcgcg cgcgctcgac agagaaatga aacggaagag aaaaaagga gtttctgccc 60
 ttcagagaga gctcaactgc ctgtgtgttg ctcagcctcc ctccctgtt cacaataagt 120
 caaagtcac acctcaaact caaatctatt tttaataag aaagaaggcc agtgaaggag 180

```

ggcaggcaag atgtggccaa ggaaggcatt ggggaaaagg taacatttgt actgggagtt 240
tggtagatga agaaggtaag aaggagaagt acagacagtt aaagatggca ttgaaattcc 300
agagtcccag aggaggagtt tgcagggaca gcagggtggca cttgatgagt tagaatttca 360
gatgtgatga gtttgaagca cctgggagggc atctaagtag acatgattac cagacacctg 420
gagctgaata agaggtcctg gagatattga tttagagggtg attgttctct catccatgta 480
tccattcatt caccaggga agggaaatgt gtacagtacc tactctaggc aggccctatg 540
ctggatattg ggaatacaat gatgaacaaa acagatgccg ctcgag 586

```

<210> 1206

<211> 276

<212> DNA

<213> Homo sapiens

<400> 1206

```

gaattcgcgg ccgcgtcgac gcctcgatca ctgcatttgc acagggtgaa gtctgtgtgc 60
ggcaagttgg tgagggcctt cagcaggatc tgggcgggtga ccgtgggtctg aaagaaggct 120
gggttgaact ggtacagctt caggacagcc aggttggctt ccagatcata ggcattttcc 180
ttggcctcgg tctctacata gcgctccagg gtggccagggt tctcaggatt gtacctgtcg 240
ataccctcgt cgattgaatt ctgacctgc ctcgag 276

```

<210> 1207

<211> 218

<212> DNA

<213> Homo sapiens

<400> 1207

```

gaattcgcgg ccgcgtcgac attgtgttag cctgttccct gagctctctt cgtgatcaag 60
aagactgata agataaatca agagacttgc ccaaaattac ctaggaaatc tgtagcagca 120
gcagaaccaa actccgggtc ttgctaaatc tagataccag gctagctttt ctatggacct 180
agaattaacc catacaaatg tacaagctta tctctcag 218

```

<210> 1208

<211> 398

<212> DNA

<213> Homo sapiens

<400> 1208

```

gaattcgcgg ccgcgtcgac ccgagcctca gttgtcttct ctgtgagggtg ggaatgccgg 60
tgaatcctgc cgctggcgtg gatgagaagt gaatgcgtgc tcggagctgc gactgacagc 120
gggcaggagg cggccaggga cacttggttt ctccagggtt ggaaggcttc tagaaggttc 180
ctcatcaagg gaagtgtggc tggggggcgc gtctacctgg tgtacgacca ggagctgctg 240
gggcccagcg acaagagcca ggcagcccta cagaaggctg gggagggtgg cccccccgcc 300
atgtaccagt tcagccagta cgtgtgtcag cagacaggcc tgcagatacc ccagctccca 360
gccccctcaa agatttactt tcccatccat cactcgag 398

```

<210> 1209

<211> 456

<212> DNA

<213> Homo sapiens

<400> 1209

```

gaattcgcgg ccgcgtcgac agaaggatc actccatta gggcctgctt tgcttatgca 60
tgtgtgtgca catgcatgta aaccaggagc ctccagctca cggcctccag gcctgggcca 120
gtcttctgctg ctccctgctt ctcccccagc tggctgtgtc ctgagtaact ggaacatgag 180
actgtatctg caggactggc cccatgtgtg ccgagtcaga agtctgtttc ctgtgagtcg 240
ccaccgttca ctacgtcttg cctcctccatg ctttggagcc agtctggtgg ctccctgtaag 300
gttctcaagg ctggtggcag ctacgtctgg ggtcaggaca tgtcggggtc atgcgtttct 360
ggccctgaca taagctgtct ggcctctctg tgacatgatg aaattgaaat caatccacag 420
tccatgaaat tgtgacactc caccagatat ctcgag 456

```

<210> 1210
 <211> 408
 <212> DNA
 <213> Homo sapiens

<400> 1210
 gctcggaggc catatggata atcttcaagg gtaaattcac tgagatgaac tgcaaactcc 60
 cctttccaca tgcagcagca ggacatacat gtccctgatgg gtttgtgtaa ccctgccaga 120
 atggctggca ggacaagtta actatcattc ccttcacaaa tcagtcagtc aggaaatccc 180
 tacgtgggaa ggatcacagg gcctacaaag aggcagtgac agcaaaactt cagctgctat 240
 tgaatctgaa tgcatttctg gttttttaac cagatcccca gcaagtaatt ttaacagccc 300
 gtaaattgtag agtatgctag actatgagga cacagatgcc cagcccagtg tgggggggtaa 360
 gttctacact gcactgtcct tccacagggc ccctcagggt cactcgag 408

<210> 1211
 <211> 389
 <212> DNA
 <213> Homo sapiens

<400> 1211
 gaattcgcgg ccgcgtcgac attacaatta tcatgctcac acttaatagt atattctatg 60
 tcctcttggc tgtctatctt gatcaagtca tccagggga atttggctta cggagatcat 120
 ctttatattt tctgaagcct tcatattggt caaagagcaa aagaaattat gaggagtatt 180
 cagagggcaa tgtaaatgga aatattagtt ttagtgaaat tattgagcca gtttcttcag 240
 aattttagg aaaagaagcc ataagaatta gtggtattca gaagacatac agaaagaagg 300
 gtgaaaaatgt ggaggctttg agaaatttgt catttgacat atatgagggt cagattactg 360
 ccttacttgg ccacagtga acactcgag 389

<210> 1212
 <211> 402
 <212> DNA
 <213> Homo sapiens

<400> 1212
 gaattcgcgg ccgcgtcgac ccgcctcag cctccgaaag tgctgggagt acaggtgtta 60
 gccactgcgc ctggcctcat tgtactcctt aacacaagaa gacttcaaca atgataagta 120
 gttgtttata aggaagcagg atcattacca aaataaatcc tgctaaaaca acaggaatca 180
 tgttttaaa cctagtttgc taatttttgc tagtaggata agagtgatcg taatatctcg 240
 aacattacat agacacttaa aacctttagt tgtatttcat caaaaatctg ttcatacccc 300
 acgttggttt caaaacatac tatgcttttt cttegtgtta tttctatat tcatTTTTgt 360
 gtgtatgtgt atgtcacaaa tattgatatg cctgggctcg ag 402

<210> 1213
 <211> 168
 <212> DNA
 <213> Homo sapiens

<400> 1213
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 gtgccttggg tcatccctaa gggcctaac cggggagtta tcattaccat gttggtgacc 120
 tgttcagttt gctgctatct ctttggctg attgcagcaa acctcgag 168

<210> 1214
 <211> 180
 <212> DNA
 <213> Homo sapiens

<400> 1214
 gaattcgcgg ccgcgtcgac caaaaaagtc cttttgaaaa agttgatgat gatgattttt 60
 acatcagaga atatctttag atcacgttta agagatgatt actgggtgta tgtagatag 120

caagtactgt ggatgggttta aggggtgaata ggaaatatct agatgttaag ggggtctcgag 180

<210> 1215

<211> 506

<212> DNA

<213> Homo sapiens

<400> 1215

gaattcgcg cgcgctcgac cagcaatccc tccctaggtc aatcgctccc aaacccttaa 60
ccatgagact ccccatgaac cagattgtca catcagtcac cattgcagcc aacatgccct 120
cgaacattgg ggctccactg ataagctcca tgggaacgac catggttggc tcagcaccct 180
ccaccaagt gagtccttcg gtgcaaatcc agcagcagat gcagcagcag cattccagc 240
accacatgca gcagcacctg cagcagcagc agcagcatct ccagcagcaa attaatcaac 300
agcagctgca gcagcagctg cagcagcgcc tccagctgca gcagctgcaa cacatgcagc 360
accagtctca gccttctctc cggcagcact cccctgtcgc ctctcagata acatccccc 420
tccctgccat cgggagcccc cagccagcct ctccagcaga ccagtcgcaa atacagtctc 480
agacacagac tcaagaatta ctcgag 506

<210> 1216

<211> 173

<212> DNA

<213> Homo sapiens

<400> 1216

gaattcgcg cgcgctcgac gtaatttact aagggttgaa atggtattct aacagtgagt 60
ccattgtctt gaggattaat ctgatttata agtaatactg atagacatat tttcgtagat 120
ctgagcagaa ataaatgcat gtttctagca tatgtaatat aaaaactctc gag 173

<210> 1217

<211> 287

<212> DNA

<213> Homo sapiens

<400> 1217

gaattcgcg cgcgctcgac gaacggtaat tacattgaga tttttaaaaa tatataaatg 60
cttaaaatta cagaagtaat aaaaagaatg gttttagaca aatcttatgg aaagtgtttt 120
attttattct ttataatta tttttatgga tatttgtctt tattagtgtg gtaatatatt 180
ttataacgct cataatttga actttcaggc taatgtacta taaatatttg tattacgcat 240
tactaccatc ccaaatgtac caaaacacgt ttagagagaa cctcgag 287

<210> 1218

<211> 327

<212> DNA

<213> Homo sapiens

<400> 1218

gaattcgcg cgcgctcgac cgatcttcat gaatgcaata tttatgatgt gaaaaatgac 60
acaggattcc aggaaggcta tccttaccct tatcccata cctgtactt actggacaaa 120
gccaatctac gaccacaccg ccttcaacca gatcagctgc gggccaagat gatcctgttt 180
gcttttgcca gtgccctggc tcaggcccg ctcctctatg ggaatgatgc caaggctctg 240
gagcagcccg tgggtgtgca gagcgtgggc acggatggac gtgtcttcca tttcctagt 300
tttcaactga atatcacaga cctcgag 327

<210> 1219

<211> 335

<212> DNA

<213> Homo sapiens

<400> 1219

gaattcgcg cgcgctcgac ccttgagggtg attcatcttc caggctctcc tcccatcaag 60

tctctcctcc ctagecgtctt gggtccttaa tggcagcagc cgccgctacc aagatccttc 120
 tgtgcctccc gcttctgctc ctgctgtccg gctgggtccc ggctgggcca gccgaccttc 180
 actctctttg ctatgacatc accgtcatcc ctaagtccag acctggacca cgggtggtgtg 240
 cggttcaagg ccagggtgat gaaaagactt ttcttcacta tgactgtggc aacaagacag 300
 tcacacctgt cagtcacctg gagaagaaac tcgag 335

<210> 1220

<211> 228

<212> DNA

<213> Homo sapiens

<400> 1220

gaattcgagg ccgcgtcgac cttgatttat aactaaaata tttaaacata cgggtgtgctg 60
 gactccattt gtactcttac ccagggcctg caaatgttag gagctggcct gaccaaggga 120
 ataaagatta cgaaaatgtt caccctattt tattttattt tttttattt ttttgagaca 180
 gcgtctcgct ctgtcgccca ggctggaaag cagtggcaca atctcgag 228

<210> 1221

<211> 270

<212> DNA

<213> Homo sapiens

<400> 1221

gaattcgagg ccgcgtcgac gtggtttaag acaaaaacac ataaacaagt tcagacaact 60
 gattgtatga ttctgggaat tctttgcttt cctttccttc tccctcggca ccacctcttc 120
 tccccaggcc tccctgtcgg gcattgggag gaggttgagg ctcagcatct tgaggaatgt 180
 gtcaagacag cccctccgct ccgcgtgca cggccagccg cctttgtccg ggaggacaga 240
 cagaaacgca gcaaggcaca cactctcgag 270

<210> 1222

<211> 207

<212> DNA

<213> Homo sapiens

<400> 1222

gaattcgagg ccgcgtcgac catcagcccc ccaagatggc gatgcaagcg gccagagggg 60
 cgaacattcg acttccacct gaagtaaacc ggatattgta tataagaaat ttgccatata 120
 aaatcacagc tgaagaaatg tatgatata ttgggaaata tggacctatt cgtcaaatca 180
 gagtggggaa cacaccaaca actcgag 207

<210> 1223

<211> 345

<212> DNA

<213> Homo sapiens

<400> 1223

gaattcgagg ccgcgtcgac ctccttgagc cactgggtc atatgcgtgt caccacacgt 60
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 tctcagacac tcccagactg aggggtggtg tgtggcgggt ggcagggtgg ctgtggagac 180
 tggatgatctg gagcctggtg ctggcacctg gcctgagttt ccgtgggcag ctggcgggga 240
 cctgtgctgc tgctgtgac tgtgggtggg cgggcggcgc ctgggagtgg ctcttgctca 300
 ggaattgata ggaaccctaa cgactaggat acccccagac tcgag 345

<210> 1224

<211> 205

<212> DNA

<213> Homo sapiens

<400> 1224

gaattcgagg ccgcgtcgac gctgattgag cctcttagat ctgtaggta atatttttca 60

tcaaatttgg aaaatgcttg gccactattt attcaaaatt tctgccccag tctctctcct 120
 ctgcttctgg gactccagtt atatacgtaa gaacactgaa tgttgtctac aggtcgtgga 180
 ggctttgtac tcccatccac tcgag 205

<210> 1225
 <211> 534
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (171)

<220>
 <221> unsure
 <222> (173)

<220>
 <221> unsure
 <222> (175)

<400> 1225
 gaattcgagg ccgcgtcgac gactcctgtg aggatgcagc actccctggc aggtcagacc 60
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 gatgccctgc agtacctgca gaaggtctct ggagacatct tcagcagggtg ntntnccagt 180
 gccaaagtacc ctgctccaga gcgcctgcag gaatatggct ccattcttcac gggcgcccag 240
 gaccttggcc tgcagagacg cccccgccac aggatccaga gcaagcaccg cccccctggac 300
 gagcggggccc tgcaggtccc tgagaactac ttctatgtgc cagacctggg ccagggtgcct 360
 gagattgatg ttccatccta cctgcctgac ctgcccggca ttgccaacga cctcatgtac 420
 attgccgacc tgggcccccg cattgccccc tctgcccctg gcaccattcc agaactgccc 480
 acctccaca ctgaggtagc cgagcctctc aagacctaca aaatgggggt cgag 534

<210> 1226
 <211> 284
 <212> DNA
 <213> Homo sapiens

<400> 1226
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 aaatgaacat aagaaaaacy ttgagatcac tctcactctt gatgttgggc gtgggagggg 120
 tgccagccgt cattccttgg ccggctccct tgctcccgtg gaggaggggt gactccaccc 180
 acctccccgg cgtgggtctc ttgagttcct cccggtttcc ccattcggaa cctcactgtg 240
 atggagggtg tctctgcaag aagcatttcc tggttctccc tata 284

<210> 1227
 <211> 236
 <212> DNA
 <213> Homo sapiens

<400> 1227
 gaattcgagg ccgcgtcgac gtgcgtgctc cttggtttgt tccacctgcc tctcgcate 60
 ttcaatggca ctctccaaact gccttgccag ggtccacat tcccgtgttt tctcctocag 120
 ccgcagctgg gactgggtgga ttgcctctc cctcttggca atcacctgta ggaactcgat 180
 attctgggca ctggtgcct ccagtttctc ctccagttca tccaccttcg ctcgag 236

<210> 1228
 <211> 161
 <212> DNA
 <213> Homo sapiens

<400> 1228

gaattcgcgg ccgcgtcgac atttttggtg caagcctggg tcgtcttttc tatgcacatg 60
 gggcagctat tttagaaaca cttggagtgc tttgtatgta gtcccgcatc ccatcttttt 120
 catttgacat cacgtggtgg gaatttccac aacatctcga g 161

<210> 1229

<211> 237

<212> DNA

<213> Homo sapiens

<400> 1229

gaattcgcgg ccgcgtcgac gaaaaataat tagtggtata gtcttaagat ttgtttttcta 60
 aagttgatac tgtgggttat ttttgtgaac agcctgatgt ttgggacctt ttttctcaa 120
 aataaacaag tccttattaa accaggaatt tggagaaaaa aaaaaccctg gttttttatt 180
 tttgtatttt attattgttt acttcaaact ttgttttaca gcgtcccca gctcgag 237

<210> 1230

<211> 153

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (7)

<220>

<221> unsure

<222> (14)

<220>

<221> unsure

<222> (104)

<400> 1230

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 tgggaagaca acacttctga actatatattt gacagagcaa catngtaaaa gagtagcggt 120
 cattttaaat gaactctggg aaggcaactc gag 153

<210> 1231

<211> 217

<212> DNA

<213> Homo sapiens

<400> 1231

gaattcgcgg ccgcgtcgac atttgaatac catattattt ctttctattt gggtaatgat 60
 cgggttaata ggatttctta cttacatagt aggtgtggaa aaggtgggtt ttacttattt 120
 attttttttt agacagtctt actctgtcac tcaggctgga gtacagtggc gtgacctcag 180
 ctcaactgcaa cctccacctc ccgggttcaa gctcgag 217

<210> 1232

<211> 201

<212> DNA

<213> Homo sapiens

<400> 1232

gaattcgcgg ccgcgtcgac cggaatctcc tctgtgaatt ccacctgcct agttctcccc 60
 tttcatcttc tctctcttc caccatcatca aagaggaaaa gctctttgtt caaaaggaag 120
 agaaaacgta aagcatctta ttttctttta aaagaatttt aaacctgaa aaagatattt 180
 ttaaagaaat tcacgtcga g 201

<210> 1233
 <211> 160
 <212> DNA
 <213> Homo sapiens

<400> 1233
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 catttctctg acagggacaa gactgtcgtt tcagcagctg cacgcgaagg ttggtgatct 120
 tcctctcgag gcaggtctag aattcgaggt tctccctata 160

<210> 1234
 <211> 330
 <212> DNA
 <213> Homo sapiens

<400> 1234
 gaattcggcc aaagaggcct acttttggtc catgtaagt ctacccgttg ctgggggagg 60
 agtcatggtt tatttggaat tgcagttgc aatcatggtt ctgtcatttg actgcacagt 120
 atcagaggag cctgttaacc tctctgtgcc ttagtttctt agcccatgaa agagatcatt 180
 gcctgaccca gggactacct caagggtctt tgatgaggac aagtgcaggt aggaagatgc 240
 aagagccttt agtaccagg ttctcaacac tgactacatg ctggaatgac tgtgaagctt 300
 ttaaaaaatg ttagtgccca ctctctcgag 330

<210> 1235
 <211> 493
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (15)

<220>
 <221> unsure
 <222> (107)

<400> 1235
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 ttgaaaatgt ctctctgect gttcatcctt ctgtttctca cacctgngta ttttatgcat 120
 ttgtcctctc caatgtatat gcacagagag gcacaggcat gtggactgtt caggcagaaa 180
 cttgtctaca ttaccatctg gactgcaaga gaattattata catttaaacc tgtcttataa 240
 ccactttact gatctgcata accagttaac ccaatatacc aatctgagga ccttggacat 300
 ttcaaaacac aggcttgaaa gcctgectgc tcaactacct cggctctctg ggaacatgtc 360
 tgctgctaac aacaacatta aacttcttga caaatctgat actgcttacc agtggaatct 420
 taaatatctg gatgtttcta agaacatgct ggaaaagggt gtctctcatta aaaatacact 480
 aagaagtctc gag 493

<210> 1236
 <211> 381
 <212> DNA
 <213> Homo sapiens

<400> 1236
 gaattcggcc aaagaggcct agataaatct tcctcatggg ggctctcttg tgtattgcag 60
 gatagaataa agagtctgac tctgtttttt atcattgacc accgacaacg ttccagtccc 120
 accacctctt atttccctct tgcctctcat ctgtgcaagc ctttaactaag aaagcttgaa 180
 ccactctctt cttggctcca gggggaagtt caaaccagc aaacacaggt ccatgggttg 240
 gaatcttcac cctagctcac ttcttaacca taataaaaac ccaagccaca ttcagactga 300
 cttgggtctc tgcttgcac tctccagaaa gccttattat gtgagtaata aaccttttga 360
 taccctcttg ttctccctat a 381

<210> 1237
<211> 575
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (143)

<220>
<221> unsure
<222> (440)

<400> 1237
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aaaaaaaaag aaggggaaag aaatcatggc caaaaaata ttatttaacc cccacccac 120
ccccaaagct ctagccattc atntgagcat caccacatc ccactcattg cctgatattc 180
ggatgggtggc atactctgcc ccaggaaaac tgcctgaagg cacgggggca atgggtgcca 240
attttagctc tcagcagggt agtcaaccag acaaactggg gggctaaagt ccagaaattc 300
tttccagggt ttctgctcat tggctgagca catacaaact gtcataagcc tgtaaaattt 360
aaggggagtt ggggtggggc gtaagagcaa aaggacagca ggagaagaga aattacgggt 420
cacccaagtt ttctctgggn tagtggctct ggatatagat ttaaagagag gtcagagtaa 480
atggactcca ggtttcttat caaagaaaac tatccctcaa tgaggagctg agatgtgcca 540
tgcaagagag ttcttacctg caggttctcc ctata 575

<210> 1238
<211> 454
<212> DNA
<213> Homo sapiens

<400> 1238
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aagaactaaa actttcagca gaatgtcaga accacatctt catttggcag acacacaatg 120
ctttgtttat tatttgcgtg ttgctgaaag tgttcatctg tcagatgtca gaggaggaat 180
tacaacttca ttttacttat gaagaaaaat ctcttgga ttacagttct gactcagaag 240
atcttttggg agaattgctg tgctgtttga tgcagttgat cactgatatt ccactcttag 300
atattacata tgaaatatca gtagaagcta tatcaacaat ggttggtttc ctttctgccc 360
aactcttcca caaagaagtt ttgcgacaga gcatcagcca caagtatttg atgcgaggtc 420
catgtcttcc atacaccagc aatttctccc tata 454

<210> 1239
<211> 356
<212> DNA
<213> Homo sapiens

<400> 1239
gaattcggcc aaagaggcct acagacggcg acagtggcgg cggcgccatg gcagggttg 60
caggatccct gctgccttgg tgatcccggt ctgacagcca gagagcacag cggctcagct 120
cctggagagt gaggggtgaa gaaagcggag ggcagccgcc tgcgcccgtt ggctccatt 180
aggtcgggtc ctgcagcggg gcccggcagc cttggtgaag gccctgcccg gcagagatca 240
tgtattgcct ccagtggctg ctgcccgtcc tctcatccc caagcccctc aaccccggcc 300
tgtggttcag ccactccatg ttcattgggt tctacctgct caacgttctc cctata 356

<210> 1240
<211> 419
<212> DNA
<213> Homo sapiens

<400> 1240
gaattcggcc aaagaggcct acctggcccg tgtggtggag ggctggaacc ggcagtaggc 60

tgagcggaca gaggttctca ggggacttca agaggaacac caggcagcag agctcaccag 120
 aagcaagcag caggagacag taacccgcct ggaacaaagc ctttctgagg ccatggaggc 180
 cctgaatcgt gagcaggaaa gtgccagact gcagcaacgg gaaagagaga cactggagga 240
 ggaaaggcaa gctctgactc tgaggttga ggcagaacag cagcgggtgt gtgtcctgca 300
 ggaagagcgg gatgcagctc gggctgggca actgagttag catcgagagt tggagactct 360
 tcgggctgcc ctagaagaag aacgacaaac gctcgaggca ggtctaggtt ctccctata 419

<210> 1241
 <211> 696
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (16)

<220>
 <221> unsure
 <222> (18)

<220>
 <221> unsure
 <222> (108)

<220>
 <221> unsure
 <222> (112)

<220>
 <221> unsure
 <222> (133)

<400> 1241
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 tactattcaa ctaagacaac taagaaaaat atattccaat aaaaaatnta anattacatt 120
 atgaggggtga acntgactat ttaacaatc tgtacttta ttaatttaatt aagaaccac 180
 attagtaaaa aaaattttta aatccagatt agtatttagc ctcttttaga atttgtctag 240
 caggttttcc agtttccacc agaaaacat aaaaatactt atctattggg ttatcctgct 300
 agacaaaaat cttagaaagc tctaacatta atctagagtt tttaaaaggg caaattgtag 360
 aatctaaaga gcaggatct gaatatgtct tctattcatg tgaatggcag gtgtgtatgg 420
 caaacttttc tcttctccag gtgttttgc ctgatcaacc cttgttttcc ttatgggtcaa 480
 atcagcatct tcagcaggca ctctgcacag aatcattggt ttcagaacat gatgccctgt 540
 ttattcaaaa gaagagtctc attcagagaa acactaataa ttttggctaa atagctaata 600
 ataattaact taaaaatatt tagttgtgac ttttatttaa acattaaaaa agagttaaag 660
 caacatatga atatggtaaa aaatgttctc cctata 696

<210> 1242
 <211> 247
 <212> DNA
 <213> Homo sapiens

<400> 1242
 gaagctatca atttggatac cagtctggta tctgctctac ctcccttcac tcacaactga 60
 cttggaacca ataaaggagg gagtgcgaat gcctatcttc cctctcaagt ttctccagac 120
 ttactgcag cagcatgtgt cgtcctggc cctgctgtgc catccctctg cctcctcacc 180
 acatctctca ctcatagact cagggcttcc ctctgggtcag tactcccatg actccatgca 240
 cctcgag 247

<210> 1243
 <211> 349

<212> DNA

<213> Homo sapiens

<400> 1243

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ggaatgtaag ctctatgagg gcaaggactc ttgtcttgtt tactgctgtg ttcttctagc 60
ataaacacac acacccccctt agaacaattc tggatacaca atagaaattc agcaaatgtt 120
tggtgtaatg aaatggccctt aaaatactat tttaaaactt gttttctttc caggttatat 180
tttcttattt aatgtgtgta aaaatgtggt ggtatgaagt tttttgggtt taaaaccttc 240
aatagtgagt ttttggggc acattgtatt cataagagct gttaattcta gccataactt 300
taaataaatg tattgggtgc ttgtgtacat gactatctgt aaactcgag 349
```

<210> 1244

<211> 251

<212> DNA

<213> Homo sapiens

<400> 1244

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ggagcccacc gagaggcgcc tgcaggatga aagctctctg tctctctctc ctccctgtcc 60
tggtgctgtt ggtgtctagc aagaccctgt gctccatgga agaagccatc aatgagagga 120
tccaggaggt cgccggctcc ctaatattta gggcaataag cagcattggc ctggagtggc 180
agagcgtcac ctccaggggg gacctggcta cttgcccccg aggcttcgcc gtcaccggct 240
gcaaaactcga g 251
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<210> 1245

<211> 528

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (89)

<400> 1245

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gcttgcccat ggctgcttcc ttttttccaa tctctgtggc agtttttgcc ctaataaccc 60
tgcagggttg tactcaggac agttttatng ctgcagtgtg tgaacatgct gtcattttgc 120
caaataagaa cagaaacacc agtttctcag gaggatgcct tgaatctcat gaacgagaat 180
atagacattc tggagacagc gatcaagcag gcagctgagc aggggtgctc aatcattgtg 240
actccagaag atgcacttta tggatggaaa tttaccaggg aaactgtttt cctttatctg 300
gaggatatcc cagaccctca ggtgaactgg attccgtgtc aagaccccca cagatttggg 360
cacacaccag tacaagcaag actcagctgc ctggccaagg acaactctat ctatgtcttg 420
gcaaatttgg gggacaaaaa gccatgtaat tcccgtagct ccacatgtcc tcctaattggc 480
tactttcaat acaataccaa tgtggtgtat aatacagtat tctctgag 528
```

<210> 1246

<211> 257

<212> DNA

<213> Homo sapiens

<400> 1246

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gcaagaacat gaaacatctg tggttcgctc ttctcctggt ggcagctccc agatgggtcc 60
tgtcccaggc gcagctgcag ggtcgggcc caggactggt gaggccttcg gagaccctgt 120
ccctcacctg cgctgtctct ggtgacccca tcagttctta ttctggagc tggatccggc 180
aggccccagg gaagggactg gagtggattg gcactatcta taccactggg aatatcaacc 240
acaatccctc cctcgag 257
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<210> 1247

<211> 162

<212> DNA

<213> Homo sapiens

<400> 1247

gaattcgcgg ccgcgctcgac gtaagcaata tttagttaa aggcatttac aagtcataata 60
 acttaatcat tttaaatgaa tgggtgtgaat acaagcagct tttctttttt ttttaatttta 120
 tttctgttta gtatttctga ttacgtaaca ggaagtctcg ag 162

<210> 1248

<211> 234

<212> DNA

<213> Homo sapiens

<400> 1248

gaattcgcgg ccgcgctcgac ccagcatttt gttcctttct atttcaccgc tgctcagtaa 60
 caacctacac ttcacttttt gatgccattg tcattcactc attcattcat tatttgetca 120
 ttcatattgt tcaacaatga aaccaatgct caagcagatg gaggtggctg ggtgcagtgg 180
 ctcacacctg taatcccaac cctttgggag ggcgaggtgg gcagatcact cgag 234

<210> 1249

<211> 156

<212> DNA

<213> Homo sapiens

<400> 1249

gaattcgcgg ccgcgctcgac tttccctttt atgtgtaatc ctttgttttc ccggagtcac 60
 tacgtcttag tgtcttgttt gctcagtttc ctatgtatct atcacaaatt cagcccagac 120
 cctgatagaa gtgtgaatct caacacattc ctcgag 156

<210> 1250

<211> 203

<212> DNA

<213> Homo sapiens

<400> 1250

gaattcgcgg ccgcgctcgac agaacagtca gtttaccaag gaaggccatt atctttgact 60
 tgcaaaagctt ttacagccaa acattgtttg cttacagttc ttttaataca atgaagacct 120
 taatggtaag aagagtccca ttactactcc ctttgtacat ggaggtcac ccaataaaga 180
 aaggacgatg tcacgctctc gag 203

<210> 1251

<211> 175

<212> DNA

<213> Homo sapiens

<400> 1251

gaattcgcgg ccgcgctcgac gagaactgct gctttgtctt cctgtgttag tgagaccagt 60
 tgtgtgttat cagatagtct agactttcaa cagcagttat aagtgcccca gttttctcct 120
 tactggttat tccttagagt ctaagggtgt gtattaataa atgaggtggc tcgag 175

<210> 1252

<211> 129

<212> DNA

<213> Homo sapiens

<400> 1252

gaattcgcgg ccgcgctcgac cctcgattga attctagacc tgccctcatcc cagcctttgt 60
 tttattatca tccattttac atcatcatat gcgataaacc ccaaaatgca ttgtcactac 120
 ttactcgag 129

<210> 1253

<211> 178

<212> DNA

<213> Homo sapiens

<400> 1253

gaattcgcgg ccgcgtcgac aaaaaagaga aactacttta ttgatgtttt ttcctcctga 60
gccccctgctg gtcttattga atgtgtcacc ttgtattata attgttttta ttgtcactg 120
ttgtcatact gcttactctt taccctcttc ccacatacat acacaaatgc tactcgag 178

<210> 1254

<211> 456

<212> DNA

<213> Homo sapiens

<400> 1254

gaattcgcgg ccgcgtcgac gcttcggcga tgggctcgtc actcgggtcg taatactgct 60
ccaggggggca gttacaggaa ggtaaccatt tacagccaga aaagggttaa tatactcttt 120
tcattgtttt cagaaaatgt ataaaggccc aatttgtaac agcaagggtt tcaaattaag 180
acaattcgta tagagtagca attgctgcac gaagtaaagt cttttttttt tttttttaac 240
atttgtcatt taagaaggct gccctgcggt attcataatt cattgtttac cacaagggtg 300
gttcataaat ttaagcttta aaaacgatct gtaagttgat actttggctc ttggagctt 360
atttcattaa gaaattttcc ttgattgacc tcagggcagc tggggcactc caaggggcta 420
tggcgataaa aagctcaatt ggtaaagaca ctcgag 456

<210> 1255

<211> 205

<212> DNA

<213> Homo sapiens

<400> 1255

gaattcgcgg ccgcgtcgac gtgcctctaa aattaaatat ttgggatctt ttgattagtt 60
ctggatgcat caaataagca taactaaact attctttttt tgtttgtttt tgagacggag 120
tcttgctcag tcgccgggc tgaagtgcct cagctttctg agtacctgtg actacatgtg 180
tgcaccacca tgcccagttc tcgag 205

<210> 1256

<211> 271

<212> DNA

<213> Homo sapiens

<400> 1256

gaattcgcgg ccgcgtcgac ggaatctagt tgcctaagga taaactgagt ttgacttcat 60
tagtgcacaa atgatagggt tgtgtagagt tattatagca ttaatcaatt tgatggattg 120
gaaatatgac agaactgaag cagcatgtaa tattagtgcc tattattctg gaaattatgt 180
cttcacctac attcatgtgg cagaggagtc atgtgtgaca tcaagaaggc agaacttaaa 240
gaaacaaaca acagaggggca tcttactcga g 271

<210> 1257

<211> 245

<212> DNA

<213> Homo sapiens

<400> 1257

gaattcgcgg ccgcgtcgac cttacatttg cttagggttt tcccaagatt cataggcctc 60
ttgtctttat gcatctaata atatcateta ctgctacaac ttttaaccatc ttttcaacac 120
tgatgattct ccctctgctc tgcctttca gtaactgttt tctcctgaac tccagaccca 180
tatctcttgc tgcttgcaag cagtttatte tgaatccctc tgactccaca actgggtccac 240
tcgag 245

<210> 1258

<211> 217

<212> DNA

<213> Homo sapiens

<400> 1258

```
gaattcgcgg ccgcgtcgac caccatecta ctggagaaag catactttta tgctaagatc 60
ttactttaag ctttttatgt gaacaaaaga tgtacatata gtaagtatta cttccgtagt 120
cctcaaattt actataactt ttgtacttag tatatgtttt atatttggaa aacagcacta 180
cgcttagttt tctgtagtt cctgagtgat gctcgag 217
```

<210> 1259

<211> 156

<212> DNA

<213> Homo sapiens

<400> 1259

```
gaattcgcgg ccgcgtcgac atttctgctc attgtttcca ttctgcaccc cattttttct 60
gtttttttcc tgagattatt aggaatgttt tatcataggg tattattaat tttctcttta 120
gtggcctctt taccacattg tcacattatc ctcgag 156
```

<210> 1260

<211> 432

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (22)

<220>

<221> unsure

<222> (24)

<400> 1260

```
gaattcgcgg ccgcgtcgac ancnagatgg aggattcggc ctcggcctcg ctgtcttctg 60
cagccgctac tggaaacctc acctcgactc cagcggcccc gacagcacgg aagcagcttg 120
ataaagaaca ggttagaaaag gcagtggacg ctctcttgac gcattgcaag tccaggaaaa 180
acaattatgg gttgcttttg aatgagaatg aaagtttatt tttaatggtg gtattatgga 240
aaattccaag taaagaactg agggtcagat tgaccttgcc tcatagtatt cgatcagatt 300
cagaagatat ctgtttatct acgaaggatg aacccaattc aactcctgaa aagacagaac 360
agttttatag aaagctttta aacaagcatg gaattaaaac cgtttctcag attatctccc 420
tccaaactcg ag 432
```

<210> 1261

<211> 188

<212> DNA

<213> Homo sapiens

<400> 1261

```
gaattcgcgg ccgcgtcgac ggtaagtgc tttggaaagt ggaatagagt aagggggatt 60
cagaattggt gaggatagag gttgcaattt aaagtgaggt atactgggtg gagtatcctt 120
gagagagtga tatttaggaa aaatttaacg gagaagtaac catgttaata actggggcag 180
ttctcgag 188
```

<210> 1262

<211> 161

<212> DNA

<213> Homo sapiens

<400> 1262

```
gaattcgcgg ccgcgtcgac ttaaagttaa agtgatacta aattaagtea ctgttccctt 60
gcttaaaact gttcagtgct ttccatttca ttgagaataa aattgaagct cttttcatgg 120
```

tctctaatat tctacataga cttacccttg tatacctcga g 161

<210> 1263
 <211> 209
 <212> DNA
 <213> Homo sapiens

<400> 1263
 gaattcgcgg ccgcgtcgac aaataaccct tcaacaagtt aaattgcctc taggatttgc 60
 tttctccaga ttaaattatc ccaaagtctt ttcttttttc tcataaaggc cttttcaaaa 120
 agaaacattg gttactttta aaatttcttt ttctagctct ttataaaact ttattctttt 180
 cataaatgta ccacaggata ctctctgag 209

<210> 1264
 <211> 323
 <212> DNA
 <213> Homo sapiens

<400> 1264
 gaattcgcgg ccgcgtcgac gagagtggca tgcattgataa aattcaaggc agcagtacac 60
 ctctgggaca gtctgtagca gttccctaata ctacctgtat ccatgagcgc agataggagt 120
 gaagcctcct aggtctccag tctgcagcat ctctgtcaca tggaaacctg atgggtgcct 180
 ctgtgagggg ggccaattat gcacagtgc cactaaacac agatcatttt agccttccta 240
 attagccact aataaaaaga cactgaagta agtatcctga agatcaaaga gagatttcca 300
 ccatgcctca ataactactc gag 323

<210> 1265
 <211> 220
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (188)

<400> 1265
 gaattcgcgg ccgcgtcgac atttaatat cactcttggt actttacaat cagtcactgc 60
 tccctatgga atttcatagc tcacttttat aacagacatt ggtaaaataa gaatctattg 120
 ttaaagtact catctaaaat attttaatac tcattggagt gatttttgc agcaaagctt 180
 aaaaattnac ataatgcttt gtttcaccct gatcctcgag 220

<210> 1266
 <211> 289
 <212> DNA
 <213> Homo sapiens

<400> 1266
 gaattcgcgg ccgcgtcgac cagtataaaa aacagtctct taattaaact tgtccgaatc 60
 ctctataaac ttggtaattt taggcaatat agtctccct cagtgttcat gagagattgg 120
 ctccaggaca cccctcatac caaaatcctt ggatactcaa atcccttata taaaatagtg 180
 tattatttgc atataactta tgtaccttct cctgtatact ttaaatcacc tctagattac 240
 ttataatatt aatggtaaaa ccacaattac ttctgcacca actctcgag 289

<210> 1267
 <211> 243
 <212> DNA
 <213> Homo sapiens

<400> 1267
 gaattcgcgg ccgcgtcgac tgaatataaa tttttttata gcatgttaat tgettataca 60

```

aaaaagttaa taaaagatag gttttttttt aagtatatatt ttctaaaaga ggaagattgg 120
gtttttttgt ttgtttttgt ttattttttt tctttttttg agacagggtc tggctctgtc 180
atccaggctg gagtgcagtg gcattatctc agctcctcgc aacctccacc tcccagagtc 240
gag 243

```

<210> 1268

<211> 152

<212> DNA

<213> Homo sapiens

<400> 1268

```

gaattcgagg ccgcgtcgac gggctccaga aaaccagggg gactcaaac agaatgaaac 60
tgcaaacatt cgttttattt gctattttta aaaatttggg aatatggccg ggtgcggtgg 120
ctcacgcctg taattccagc actttcctcg ag 152

```

<210> 1269

<211> 192

<212> DNA

<213> Homo sapiens

<400> 1269

```

gaattcgagg ccgcgtcgac ggttttatga acatttatatt agccgttgta ttgtgggtgg 60
ggattgtata ccattgctttt tatttgtatt ttttttttac ttcttttaga gacagggtct 120
cactctgtca cccagtctgg agtgcagtg tgtaatacata gttcagtgca gtctcgaact 180
cctgggctcg ag 192

```

<210> 1270

<211> 384

<212> DNA

<213> Homo sapiens

<400> 1270

```

gaattcgagg ccgcgtcgac attaagcatg acatatacctt catatgatca ctcatcttga 60
gttaattaga aaatacctga gttcacgtgc taaagtcatt tcaactgtaac aaactgacta 120
tggttttctta agaacatgac actaaaaaaa aagtgggttt tttccaccgt tgctgattat 180
tagacagtag gaaatagctg ttttcttttag ttttacaaga tgtgacagct ttagtggttag 240
atgtagggaa acatttcaac agccatagta ctatttgttt taccactgat tgcactattt 300
tggtttttta acagttgcaa agctttttta tggcataaaa gtataattga aatctgtggg 360
atttatttac aaacatgtct cgag 384

```

<210> 1271

<211> 173

<212> DNA

<213> Homo sapiens

<400> 1271

```

gaattcgagg ccgcgtcgac ggtggctgcc cctgtcccag cccgcaaac cccctgctcg 60
gcgtcctccc gcccggtggtc tcttgggtgg ttgccccgag aggcgcacgg ccgcctgggt 120
cgcgggggag cgaacgggag gccggggaat gcgaaccggc gcaaaacttc gag 173

```

<210> 1272

<211> 228

<212> DNA

<213> Homo sapiens

<400> 1272

```

gaattcgagg ccgcgtcgac caacctcctg ctgtccatgt attttcttct gctgggaatc 60
ctggcctctg cccacaccat cagccctctc atgaataagt tttttccagc cagctttcca 120
aatcgacagt accagctgct ctccacacag ggttctgggg aaaacaagga agagatcatt 180
aattatgaat ttgacaccaa ggacctgggtg tgccctgggc cactcgag 228

```

<210> 1273
 <211> 407
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (24)

<400> 1273
 gaattcgcgg ccgcgtcgac cgcncattta tgatttggaa caactagggt ttatataaga 60
 tacaaaaaatt aaacaaagga tttgtgcatt gcaaaaagct acaaggaggt ccaaagcagg 120
 aagtatatgca aaacatagca tttgccctg actgggagtg cagggaagat gtggaagagc 180
 agagaggaag agaaggaggc tagggttagg tacctactca agaaggttga aggggaattgt 240
 ggaaggagag gggccggtgt cctgctcctg ctgtcaaact ctagaacctt gtggggctgc 300
 tgtgatccca cagagaacgt gaagagggct cccagttccc tatggccagt gccaaagctgc 360
 aagtacatta gggagtatct ccaaggcttg tgggtgggga actcgag 407

<210> 1274
 <211> 171
 <212> DNA
 <213> Homo sapiens

<400> 1274
 gaattcgcgg ccgcgtcgac gagagatttt tacttatata atagtccctag agtttgcagc 60
 tggtaaaacc agaggctaca tccagtatca ctgctaagag acattcttca tccaccaatg 120
 ttgtacatgt atgaaaatgg tgtactgtat actttaacat gcttcctcga g 171

<210> 1275
 <211> 274
 <212> DNA
 <213> Homo sapiens

<400> 1275
 gaattcgcgg ccgcgtcgac cttgaattgc ctttagagca ttgtgtccgt ggtttcaatt 60
 gtatcacaga atgttacaca gactgaagtt aagtgggttac ttttgtcag gggttatctt 120
 atttttctcc attcagttta acatgtgtac tgcaaaagac agtatttttg gaaatgaagg 180
 catagtcttt catttaaaca tgcatacagag ggatttcact aatgaaagca ttcaaatcat 240
 gtgcctagtt cttgtttcta gcagcccact cgag 274

<210> 1276
 <211> 163
 <212> DNA
 <213> Homo sapiens

<400> 1276
 gaattcgcgg ccgcgtcgac cctgattcca aaggatatt tctgcgacac ttacaatgaa 60
 attccaacct ggcaccatct ttttcaactgc agaatgcattg aagggtggtg catcatgtca 120
 tttcgacatg catttaaattg taatgaaagg cacacagctc gag 163

<210> 1277
 <211> 254
 <212> DNA
 <213> Homo sapiens

<400> 1277
 gaattcgcgg ccgcgtcgac tcttgagata atttaagtta aatctgtatg gtgtgttttt 60
 ttttaatat tctgtttttat cttttgattg gctgtgttta cagtgaacat ttcctctact 120
 ggataactat gtgtaaattg ccattaggga ttataagcc ttacaacca gttttaggcc 180
 aggaaatgtc cacagagttt gaagttttct ccttagggaa gttgttatgt tgctatagta 240

aggagagtact cgag

254

<210> 1278

<211> 181

<212> DNA

<213> Homo sapiens

<400> 1278

gaattcgcg cgcgctcgac cgattgaatt ctagacctgc ctcgagtgat ctgcctgcgt 60
tggcctccca aagtgtctgtg attacagacg tgagccactg tgtctgtctt gtctctgata 120
tttatatgcc attatgtggc ctctactgcc ttaggattct aatgttccca ctaagctcga 180
g 181

<210> 1279

<211> 179

<212> DNA

<213> Homo sapiens

<400> 1279

gaattcgcg cgcgctcgac ccattcccttg tatttctagc tgtttttttt gtttttttct 60
aggtgttttt tgttttttta agcttctaag tgaatcaact aatataattc ttaagagaat 120
tagctgtaaa gatattcata ccattgtctt tcagacacat gcagctagtgt ctacttgtc 179

<210> 1280

<211> 239

<212> DNA

<213> Homo sapiens

<400> 1280

gaattcgcg cgcgctcgac aaacaaacaa aaaaagcatt tcttggagag aagaagcatg 60
tacagatgag caagtggaga ctaaagatgt ttgagtggat gagtagacag gtgaacaggc 120
gggcatttgt ttttattatt gttacttatt tattttttaa ttttcttttt ggatgctccc 180
tcacccccct cctccttccc caggcaggta tttcgataga taaaggatgg gtgctcgag 239

<210> 1281

<211> 213

<212> DNA

<213> Homo sapiens

<400> 1281

gaattcgcg cgcgctcgac gatttttagaa gctatagaca ttgtttaaga taactaagaa 60
tacttggcta agaagtataa ttgctaact attaaggact ttcttttttt aatgttgtac 120
actattcttc ctactctttt ttggtttttg ttttgttttg tagagactgt ctcactatgt 180
tgcccaagct ggtctcaaac ccctaatttc gag 213

<210> 1282

<211> 148

<212> DNA

<213> Homo sapiens

<400> 1282

gaattcgcg cgcgctcgac atttggactt gtacctgata agcaagctca ggaattaact 60
tggtagccac cacaaaacct aaagaaagt aggcttagaa gtgcaactta atcacaattt 120
agattttaac acacacgcat ttctcgag 148

<210> 1283

<211> 186

<212> DNA

<213> Homo sapiens

<400> 1283
 gaattcgcgg ccgcgtcgac gggaaatcagg gaaaggctgc ctcttttggt tctcaactgg 60
 tattgattat tgctatcaac tatttgggga gaaaaaatca aaatgaagcc ctgtcaaatt 120
 ttagaagtac tatctttggt ccttcaaaca ctttgtgatg acaccttaag aaaaacaaag 180
 ctcgag 186

<210> 1284
 <211> 222
 <212> DNA
 <213> Homo sapiens

<400> 1284
 gaattcgcgg ccgcgttgac tgcagttgtc gccaaacttg ggtattcatg gaatttctag 60
 taaatgaaat acctatactt tgatactgaa gactgccaaa tacataggaa ttttctttct 120
 taaaaaacag taatgaagac tatatctcct ttcccagcac tgaatgtttt actagcactg 180
 ggtgctcacc atgcaactga agaaaatgtg aaatctctcg ag 222

<210> 1285
 <211> 190
 <212> DNA
 <213> Homo sapiens

<400> 1285
 gaattcgcgg ccgcgtcgac ggtgtacgga tttttttctc aaattatcta tttgtttgat 60
 gttttttgta cccattctgt tgtgtttgct tttattaatc tataatatca tctgcttcaa 120
 tatggaaacac cccacaggtg caggtctgag gtgctccctg ttggcagctc ctaaagagaa 180
 gcagctcgag 190

<210> 1286
 <211> 177
 <212> DNA
 <213> Homo sapiens

<400> 1286
 gaattcgcgg ccgcgtcgac attgtacatg cttctggact tgctttttcc cttagtgtac 60
 cttgggggaat ttgccttgat atatggagag atgcagctgc tttgtttcat gttttgcttt 120
 tttttttgga cagttggaca tgcgtgtccc aagtgtgttt atttagccga tctcgag 177

<210> 1287
 <211> 293
 <212> DNA
 <213> Homo sapiens

<400> 1287
 gaattcgcgg ccgcgtcgac caaaaaaat gctagagtaa gaaatcagag gaatgggaaa 60
 atgagggggtg gattaaatga aatacgcata aattactata caaaatgcct gcagtgaag 120
 cccgttgaat ttgttgagat agattgcaaa ttttacttta gtcttcccag aagtcacggt 180
 aaagaagggt acagaagtat tgtgtattca aaatccaaag tgcctttggg ataaaagtaa 240
 ataggtcatt caggagaagg acatgttttc ttaattctaa aagctgactc gag 293

<210> 1288
 <211> 277
 <212> DNA
 <213> Homo sapiens

<400> 1288
 gaattcgcgg ccgcgtcgac ctaaaatttaa gtatgcagtt ctctttttgc tgggtttatt 60
 cgtgctgggt catcgtgagt aagaagcctg ccttgctgtt cctgggaaga tgccatagtt 120
 ttcgttactg gatgtttgga gtagatactg gtctgtgatt ggtggaatgg agaacacacg 180
 tgttggtgct tctgggttagc actgggtttgc attagtttat gtttccatgc cagagtttgt 240

gtggcgggc gcattgtcac cacagagtgc actcgag 277

<210> 1289

<211> 266

<212> DNA

<213> Homo sapiens

<400> 1289

gaattcgcg ccgcgtcgac aggagctatg cctccaaggt ggctccttac acccatataa 60
atgtgggatg gaattctgaga ccttagaagg gcccttcggt gtaaactctg aaggtagtg 120
ccagaaggag gtggtcaact tcctaagtgg cctgggggtca agatcatttt cacctagaaa 180
gacaccagac tatagaaatc taggcaatga caaactgcta ccattttcct catatgattt 240
tttttcaggc agcttgggga ctcgag 266

<210> 1290

<211> 139

<212> DNA

<213> Homo sapiens

<400> 1290

gaattcgcg ccgcgtcgac caagaattta ttttttttat tttttaaaat taaaaataat 60
ttatatcttc tctgttgcac gaggattctc atctgtgctt ataattggta gagattttat 120
ttgtgtggct atctcgag 139

<210> 1291

<211> 154

<212> DNA

<213> Homo sapiens

<400> 1291

gaattcgcg ccgcgtcgac gagagagtgt actttatcct cacaagtcta ttagtgata 60
ttaaataata atgaaagcaa tccttggcca ggtgcagtgg ctcatgctg taatcacagc 120
actttgggaa gcggaggcag gcagatcact cgag 154

<210> 1292

<211> 269

<212> DNA

<213> Homo sapiens

<400> 1292

gaattcgcg ccgcgtcgac gtaaatgctt attagttaac caggcagggt taaccacgtt 60
attatagaaa ctctaagagg tttcacatgt gttttttttt tgttttgttt tgtttggtt 120
ttttgagatg gattctcgtc ctgtcaccca ggtgggagtg caatggcgtc gtcttggtc 180
cctgcgacct ctgcctcccg ggttcaagca gttatcctgc ctcaacctcc caagtagctg 240
ggattacagg caccgcca cactcgag 269

<210> 1293

<211> 207

<212> DNA

<213> Homo sapiens

<400> 1293

gaattcgcg ccgcgtcgac gctaatggcc gtttgcattt gtgtcttcaa acagatcctg 60
gttacageca ttttgtgtga ttcacttcgg ggttaagta atgcaggatt ctgcaaaca 120
ggtgtcgccg tccaaatgta ctgtcctggc atagagagca ctgctttgtt ttccactgtt 180
gtagagaaaa ctaggagaa gctcgag 207

<210> 1294

<211> 225

<212> DNA

<213> Homo sapiens

<400> 1294

gaattcgcg cgcgctcgac atttcagtgg tatttttatt ttctactccc tttccttta 60
gcttggttca gatttaaatt gttcctcacc ttctagtatt ttaaggtcaa aggttaggtt 120
attgatttga catccttctt gtttgtcaat gtaaatatct acagttataa attttatctt 180
tagatgcacc aaaacaaaat gtattggcaa agagtcatac tcgag 225

<210> 1295

<211> 197

<212> DNA

<213> Homo sapiens

<400> 1295

gaattcgcg cgcgctcgac taacaatatt gattcttcca atccatgaac atgggataac 60
tttccatttt ttgtgtgtct tcttcattta ttttatttat ttattttttt gagatgggtt 120
ctagctctgt ccccatgct ggagttcaat ggcatgatct cagctcactg caacctctgc 180
ctcctgggtt gctcgag 197

<210> 1296

<211> 171

<212> DNA

<213> Homo sapiens

<400> 1296

gaattcgcg cgcgctcgac ctgacttttc tacatatgct ttatcaacct ctttaattaa 60
ccatcattgt ctattttgag agataactgc gctgcttccc attgtgtgtt ttaaattgta 120
ttgttcagtt tgagtcaaat aaaaggatat ttaatctatg gtggcctcga g 171

<210> 1297

<211> 253

<212> DNA

<213> Homo sapiens

<400> 1297

gaattcgcg cgcgctcgac cgagttgtgg aattgtcaag gatgtcacac agtggacaga 60
aagtccaagc gagggagggt ctgacctagt gctgatggag attagtgggt ggtgtctggt 120
atgaggatct actgcactga caagggtgtc ctacagagtg gagtgtgtgc atatggcctg 180
ggacgggaga ggcccaagca cagcaaggac atcgcccgat tcacctttga cgtgtacaag 240
caaaaccctc gag 253

<210> 1298

<211> 170

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222>. (32)

<400> 1298

gaattcgcg cgcgctcgac ctgcttttta anacaacaaa caagaacaac aacacaaaac 60
tggtaatgat ttggagtaat catgcgggca tattgagtct gggtagtggt tcgctgggtg 120
tagagtgggt gagacttctt gggaggactt tttccgcctc cactctcgag 170

<210> 1299

<211> 185

<212> DNA

<213> Homo sapiens

<400> 1299

gaattcgcg cgcgctcgac ccgggattta ggggcaggat aaagattagt aatagctagt 60
 aaggaaacaga attcaaaatg tggctctctaa ttacaaaatc tatagtttta acttcattta 120
 ctgctactag tgtccctgat ggtataactt tcttaaactt ttcagtaggt ccagggtgatc 180
 tcgag 185

<210> 1300

<211> 245

<212> DNA

<213> Homo sapiens

<400> 1300

gaattcgcg cgcgctcgac acttagtata actttgcact catttaaatt cagtgaatta 60
 ggttttcagt ttctctagaa ggaaaaaagc caactttttg agcctgcctt tgtttctctg 120
 cgtgtaagtg tatgtgtata taagaaatga aaattcattt tctcaccagt ttactagttt 180
 atgtaagtgt gttcccttta atccatgttt ttgagaatgg acttgggaaa gcaatgggac 240
 tcgag 245

<210> 1301

<211> 358

<212> DNA

<213> Homo sapiens

<400> 1301

gaattcgcg cgcgctcgac agtcctctgg gtgtggagcc gctagggttt gcacccatga 60
 aacagaaaag ccacaccctc caagggtgtg ctttcatttt gggactgctg cagggagggc 120
 agaggcattg ctgagactgc ctggcaacgg ctgatgcccc aggtaggacc ttttcatttt 180
 caaagtgggt ttctaagtct gcgtccaaca ctgtgtagga aaaagggttg tgcaaaaata 240
 ttctctgtca tccacccatt aaaatagtta gatgaggcta ttgccttgat gacagctgtc 300
 cacactctc atgaaattaa ccggtatgcc ggggcatttc caaatgtctg aactcgag 358

<210> 1302

<211> 150

<212> DNA

<213> Homo sapiens

<400> 1302

gaattcgcg cgcgctcgac gaatttctgt attaacaaaa tattttaata aatcttaaga 60
 gaaaatcttt taaaaaaatt ttagggcaca atgaggcacc acttcctctg ggcaaatgca 120
 tttgtctctc atttagtgga cattctcgag 150

<210> 1303

<211> 200

<212> DNA

<213> Homo sapiens

<400> 1303

gaattcgcg cgcgctcgac agcatgctta ttcttacttc taaaaatata gtcattgcat 60
 ggctgttttt ctggctactg ctacccttgt gtcaacttgt atcagcagta ttccaaggaa 120
 gcaaatggca cgttgaaatg aggataatc aaggaaggta tatttataaa gatattagta 180
 ataaagatgc tggactcgag 200

<210> 1304

<211> 188

<212> DNA

<213> Homo sapiens

<400> 1304

gaattcgcg cgcgctcgac ctggttttgt atagatgcat ggagtggcta ggaaagctgt 60
 tagaggtagg atatctagta agagccgtgg tgctcagccc tggctgcaca ttggaactgt 120

ctggagaaca tttaatggcc cgatgccag gttcacccca gatcaattat atcagcagct 180
cactcgag 188

<210> 1305
<211> 203
<212> DNA
<213> Homo sapiens

<400> 1305
gaattcgcgg ccgcgtcgac cgcaggattg ggactgatac agaggccgcc acggagcccg 60
ccggagccac cgttcttget gctgccgcgg ctgccgaat cggaaccgtc gggccgcagc 120
cgccggcaat gccgcgaagg aagaggaatg caggcagtag ttcagatgga accgaagatt 180
ccgatttttc tacagatctc gag 203

<210> 1306
<211> 160
<212> DNA
<213> Homo sapiens

<400> 1306
gaattcgcgg ccgcgtcgac caacattgaa gaggatcact gcttttcata agtaagttga 60
attttgaagt tcttgttttc ttaaattctgt agaaataaac ttgcatgttt tgtgggttat 120
gttaatttct aagctaattt gttgttggg tcagctcgag 160

<210> 1307
<211> 585
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> (18)

<220>
<221> unsure
<222> (23)..(24)

<220>
<221> unsure
<222> (277)

<400> 1307
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tggaacctct ctttctcgca ttaacctttg gccttcggca gcatataagc aattagtctc 120
ttccaaaaat ttcagttcaa atgaatcttt atacacctgc aggtcagaca gcatgccag 180
gaggctccgc aacaggctcc ggtccacggc ctgcgcgctc ctctcgcgct cgatcagcag 240
taggattcca tcaatggttt tactctgaac cttttntca ctaataatat gggttctaaa 300
cagttctaat cccatatccc agatggaggg cagcgtggag ttctgcagca cataggtgcg 360
gtccaagaac aggaagatgc ttctgatcat gatcatttgt ctgcagtggc cctgccagca 420
cgtgttaatc ttctttaaaa ataaaacact atctagttag tcttctctaa acggaaggat 480
ctgtgcctgg acgtggtctt cacaggcctg acgcagtgc ttgtagagca ttggggagac 540
tttgtgagaa cagagatttt ccacagcctg gtagagctcc tcgag 585

<210> 1308
<211> 219
<212> DNA
<213> Homo sapiens

<400> 1308
gaattcgcgg ccgcgtcgac ctttaaatgt tttttctacc ctcttctct ctttctggaa 60

ttccagttac acgttttttag atattttgat attgtcctaa aaataacatt gcctctgtac 120
 atcttttttc agctgttttt ctctttattg tttagttttg ccatttgta ttataattta 180
 gttcaggaca caaagatgag ggtaggaga agcctcgag 219

<210> 1309

<211> 176

<212> DNA

<213> Homo sapiens

<400> 1309

gaattcgcgg ccgcgtcgac cacgttagtg tagacatggc cttgggggct gagcgcagca 60
 gccaggctgc cagggctggg ggcggttagg aggcacggta gttggtgggt ggggaagagg 120
 cctgggtggt ggcggtcagt tagcctggct ggggtgaggt gatgaggtga ctcgag 176

<210> 1310

<211> 182

<212> DNA

<213> Homo sapiens

<400> 1310

gaattcgcgg ccgcgtcgac gccaggaata tgttctgtaa aaacgtgttt tatatgattg 60
 tgcagggtgt cttactgtcc ccagaactac ctgaatcaga ctgtgccca gcaggtggca 120
 ctggaataaa cctcctgtgg aatgtttctc atgccctct cttatggcag gacacactcg 180
 ag 182

<210> 1311

<211> 171

<212> DNA

<213> Homo sapiens

<400> 1311

gaattcgcgg ccgcgtcgac tgaagagaga gcaccacatg gacatccgag atgtaaccat 60
 ctaggcagtg agggcagcat gttagcagag aggtgaagga tgaagacaga gcaccaaatg 120
 ggcacccgag atgtaaccat ctaggcagtg agggcagcat gttgcctcga g 171

<210> 1312

<211> 222

<212> DNA

<213> Homo sapiens

<400> 1312

gaattcgcgg ccgcgtcgac ggagaatcac ttgaacctgg gagatagga ctgcagtga 60
 ccaagattgc tccactgcac tccagcctga gagacagaga ctccatctca aaaaaataaa 120
 gaaaccgcgc ccagcccaga cccctcattc ttaagaata gtacttctc tctaagtgt 180
 aagatcctga tgaaactgtt aaaattcagg cgagcgctcg ag 222

<210> 1313

<211> 216

<212> DNA

<213> Homo sapiens

<400> 1313

gaattcgcgg ccgcgtcgac gtaacaacca gttgagaaaa agggaggaa tgaagataac 60
 tcaggttttg agctagggtg gaggaataat ttggaaggag aagataacaa actgcatttt 120
 agaccactg agatggaagc ctcagaagga catcattgtg aaaatatcca gcaagcccat 180
 ggaaatgttg agaggtcaga accaaataaa ctcgag 216

<210> 1314

<211> 251

<212> DNA

<213> Homo sapiens

<400> 1314

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gaattcgcgg ccgcgtcgac acagctctct cctcatttta atccaagggg agagttgtaa 60
tcctgagaac agccaggatt cacagttgaa aaataattta aaaagctctt ctgggggtat 120
agatttttag ttcaaaaaaa catatcaata ttcagagtta tacagaaact gacagagggtg 180
ttatttttaa aagattcaga agaatggatg actcatactc ttcaactaga tttcatcacg 240
ggatgctcga g                                     251
```

<210> 1315

<211> 201

<212> DNA

<213> Homo sapiens

<400> 1315

```
gaattcgcgg ccgcgtcgac attagagaat aaaaggggaat gacttaaaat tttccatgt 60
atgtattgat ttatagatta tttttctgta cggtttgtta aatacatgtt tttttctttt 120
tttgagacag tcttactctg gcatttaggc tggagtgcaa tggcgcaatc tcagctcact 180
gtaacctccg ccacctcga g                                     201
```

<210> 1316

<211> 328

<212> DNA

<213> Homo sapiens

<400> 1316

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gaattcgcgg ccgcgtcgac acctgacgtg gcctctagag aatgttgccc agggcagtag 60
agcctccctg gtggcactgc tgtcagcacc accctgcaca gcccggcaga accctgcctt 120
gccctggcca tctctgtctc tgagattcac cacggagggt agcttggtta taggtgagct 180
gttaagagta ggggtttgtg ttcttggaag ttagggctta ggagccacac atttccttct 240
tgcccagctc ttgcttgctt agaccatttt ctttatcttt ttcaatgaac acttgtaaaa 300
gtgtgctcct tcctcccatc ctctcgag                                     328
```

<210> 1317

<211> 254

<212> DNA

<213> Homo sapiens

<400> 1317

```
gaattcgcgg ccgcgtcgac caaaaacatt aaaaaacttt cctaagtcac ttagagtgat 60
tttaaaactt ttttttaact gtatcacact gcttctcgat agttcaagtt aattatctta 120
tttgtatctc tagacttggg acagtgtctg tgttccagg tggctgaata ctaaggctaa 180
atattagctg aatgccttcc atgtgctcaa cctgtctatt gtctagaaaa ctaaaatcta 240
ggctgggact cgag                                     254
```

<210> 1318

<211> 203

<212> DNA

<213> Homo sapiens

<400> 1318

```
gaattcgcgg ccgcgtcgac tccgtattta gttttttttt ctctgtgttc aatctctgga 60
tttgacctc tagctccctt tcagctttct gtttctcatt gtttgctttc ttttcttctt 120
ccagctgatg ttccacttgt ttcttctgtt gtttcaaaga tttgatggtg tcattcagtc 180
gactgatttt tatggacctc gag                                     203
```

<210> 1319

<211> 271

<212> DNA

<213> Homo sapiens

<400> 1319

gaattcgcgg ccgcgtcgac ccactttttr gtagggcaaag acactttctac cacaacaatc 60
 aggtaatattc ctcatatttg tgaatatgga agtgattgaa tgtttctatc ttatttttga 120
 ttcttataat aacttcataa gtctctgcac acaaataggg tcagattaag cctcgacttc 180
 tccaaagagt tctcaaaaaca cgaagaacaa actttttaagt ctcttgatat tcttcatgta 240
 ccatttatat ttagttgctg gtcaactcga g 271

<210> 1320

<211> 576

<212> DNA

<213> Homo sapiens

<400> 1320

gaattcggcc aaagaggcct agaagctgat caagtttctg gccttgacaga gaatacatca 60
 gcttttcccc tcccggtcc aaccttcacc gggcagtgtc gggacacatc agctggcttc 120
 tggagggcac cacatagaag tgcaaaagaa ggaggtacag gcccgagctg tgttctaccc 180
 cctcttaggg ttgggaggag ctgtgaacat gtgctatcga accctctaca tcgggacagg 240
 agctgacatg gatgtgtgcc ttacaaacta tggctactgt aactacgtgt ccgggaaaca 300
 tgcctgcata ttctacgatg agaataccaa acattatgag ctgttaaact acagtgaaga 360
 tgggacaacg gtggacaatg tgctgtatc atgtgacttc tcggagaaga ccccgccaac 420
 ccccccaagc agtattgttg ccaaagtgcg gagtgtcctc aggcgcgcgc ggcaccagaa 480
 acaggacgaa gagccaagtg aggaggcagc catgatgagt tcccaggccc aggggcccga 540
 gcggagaccc tgcaattgca aagccagcag ctcgag 576

<210> 1321

<211> 115

<212> DNA

<213> Homo sapiens

<400> 1321

gaattcgcgg ccgcgtcgac ggctctcac taatcaataa cacaagtgtc aagttctaag 60
 tatttaaaaa aacaaaagac tgcaggtgac tcttctctc aggtcccatc tcgag 115

<210> 1322

<211> 557

<212> DNA

<213> Homo sapiens

<400> 1322

gaattcggcc aaagaggcct agacagaaga taaatgaaag tataaaaaaa cctttaagta 60
 gtaaaagagg cactcaaaag tgtatttctg ggtatagttc tgtcttccca gtagggtaga 120
 tgtcaggctc atctgttaat aaaagtcaac accaaaatga tggtaggaag tttgtggttt 180
 tgggggaaag ttcaaaattg gggctgtagg acatgtaaat catgaagata cgatttttta 240
 aaatagccaa atagtaatat aggtatgcta tggtagagat cttgattgtg catccattaa 300
 tgtatagtgt gcttaaaatg tctataggct aagggaattat tttgactttg atatgtggac 360
 aggaaggagc ctctgaaagt aactgaaga aattgatatt ttcagttttg tagcatcata 420
 tagtctaatt ggaatggaca gagatgtgag gcagagatat caggaagcca ttacaggagg 480
 ccgggtgtgg tgtggtaaat agtgactgcg gcagagagaa cgaaattata ttgtaaagt 540
 agagacagct actcgag 557

<210> 1323

<211> 376

<212> DNA

<213> Homo sapiens

<400> 1323

gaattcgcgg ccgcgtcgac caagcagcag cgagtaccag tcccttttct gttctgctga 60
 caagctcacc ctctgtcacc tgtcaacat catgaaggtc tccaccactg cccttgctgt 120
 tcttctctgt accatgacac tctgcaacca agtcttctca gcgccatag gagctgacac 180
 cccgactgcc tgcgtcttct cctacagccg gaagattcca cgcaattca tcgttgacta 240

```

ttttgaaacc agcagccttt gctcccagcc aggtgtcatt ttcctgacta agagaaaccg 300
gcagatctgc gctgactcca aagagacctg ggtccaagaa tacatcactg acctggaact 360
gaatgccgta ctcgag                                     376

```

<210> 1324

<211> 372

<212> DNA

<213> Homo sapiens

<400> 1324

```

gaattcgcgg ccgcgtcgac caaagtgatg agcatggttt cctattcctt tctggagatc 60
gtgtgtgtct acggctactc gctgttcacg tatatcccca cagcagtcct gtggatcatt 120
ccccagaggg ttgttcgttg ggtccttgct atgattgccc tgggcgtctc aggcctctgtg 180
ttggtaatga cattttggcc agctgttcgt gaggataacc ggcgtgtcgc cttggccacc 240
attgtgacaa tcgtgttgct tcatgtgctg ctctctgttg gctgcttggc ttacttcttt 300
gatgtctcag agatggacca cctcccagca gctataacca ctcccaacca gacagtaaca 360
gcggcactcg ag                                     372

```

<210> 1325

<211> 234

<212> DNA

<213> Homo sapiens

<400> 1325

```

gaattcgcgg ctgcgtcgac aggggaaggcg ctatagagag aaattaaatt tcacaaaagt 60
ataaaagcaa agactggcta aaatctgtaa ctccatgagt aagaataaca acaataaccc 120
attctataat taactcctcc acagtgaaca atctgctaca cattccttga tgaggaaatga 180
acctagctta ccacagtgga aacctgccac aactgcaagg ccgggggttct cgag       234

```

<210> 1326

<211> 537

<212> DNA

<213> Homo sapiens

<400> 1326

```

gaattcggcc aaagaggcct aggatctgta atgttgatta gtcttttagcc ataaccacta 60
cacttttaga aagacagaaa aatgtaagaa ttgttttta ccataatgag tcttaagtag 120
gttcgatgac tacattgggg cctgggatta tttttttaat tttaagtttg catgagatag 180
cctaataaat ggagggtggg ccaggcatgg tggctcacac gtgtaatccc aacactttgg 240
gaggctgagg aggaaggata gcttgaggcc aggagttaga gactagactg ggcaacatag 300
caagaccccg tctctacaaa gcacaacgaa aaacaacaaa tggagttagt ctatgttgta 360
ttgctttgca caaaattagg aacagggtgt tgacaattga atttgttttc tgtgaattct 420
aacctctaaa ggcattgcta gaggtcaagg accttcctgt gtagttagtg caaaagcaat 480
ctccacagga cagcactgct tccatgcttc atacatcagg aaatgaggcc actcgag    537

```

<210> 1327

<211> 206

<212> DNA

<213> Homo sapiens

<400> 1327

```

gaattcgcgg ccgcgtcgac caaccatttt gtctgcacg tcttctttcc tgtagagcct 60
ttgaagcatt gtattttggg aaaattcttc tgtaataact ataactttta taaatgggta 120
agttatttag aattatctcc agtgcttact tctcccttct tctgtataaa tctgctactt 180
caattaagtt ctctccatc ctcgag                                     206

```

<210> 1328

<211> 178

<212> DNA

<213> Homo sapiens

<400> 1328

gaattcgcg cgcgctcgac atttgatacc ttgatagcc ttactaag tattccagcc 60
gccacatggg gtcacccatt gaccctggac cactgccttc accacttcat ctcatcagaa 120
tcagtgcggg atgttggtg tgacaactgt acaaagattg aagccaagag aactcgag 178

<210> 1329

<211> 162

<212> DNA

<213> Homo sapiens

<400> 1329

gaattcgcg cgcgctcgac catgtgggtg gctgtattac tcatgtgtca gatgtaccag 60
atatcatgtt taggtattac tacaaatgaa agaatgaatg ccaggagata caagcacttt 120
aaagtcacaa caacgtctat tgaaagccca ttcgtcctcg ag 162

<210> 1330

<211> 223

<212> DNA

<213> Homo sapiens

<400> 1330

gaattcgcg cgcgctcgac gtctctcaaa aaaaaaaaaa aaagatcgtg tgtcacctgc 60
acacaacatt cacaaactaa agccaaattg tattttttaa atttcctttc tcccttcctg 120
ctccttgaga ctgttttgat tgacatcttt tgtgtttcta tttttccga ggcagtattt 180
tctttgtatg ttaatcatag ttatagtaaa gtcagcactc gag 223

<210> 1331

<211> 234

<212> DNA

<213> Homo sapiens

<400> 1331

gaattcgcg cgcgctcgac gttctctaca acagaagcca agaaggaagc cgtctatctt 60
gtggcgatca tgtataagct ggcctcctgc tgtttgcttt tcataggatt cttaaatcct 120
ctcttatctc ttcctctcct tgactccagg gaaatatcct ttcaactctc agcacctcat 180
gaagacgcgc gcttaactcc ggaggagcta gaaagagctt ccttctact cgag 234

<210> 1332

<211> 137

<212> DNA

<213> Homo sapiens

<400> 1332

gaattcgcg cgcgctcgac ttgtgcatac tgtaagcaaa ttgcttagct tctctagaca 60
tcaactgtgt tggagatttg cctagcacat ataactaaat ggtgctcacc tgcactgcac 120
tcacacactt actcgag 137

<210> 1333

<211> 181

<212> DNA

<213> Homo sapiens

<400> 1333

gaattcgcg cgcgctcgac cgagtttctt tctttcagta agacatacca aagtttgtgt 60
aaatcttcat tacttttgtt ccttagttgc tgacagggtc atgctgctcc agattttact 120
ttttcttgcc ccagttttt tgggtcatca aaaaattctc gttgatcaga cctgcctcga 180
g 181

<210> 1334

<211> 120

<212> DNA

<213> Homo sapiens

<400> 1334

gaattcgcgg ccgcgtcgac tgcatatata ccataaacac tgtgaagaag caaccattag 60
gcacaggaat ccagccagat aaattaagta gaaatgctca tctttcattt atgcctcgag 120

<210> 1335

<211> 157

<212> DNA

<213> Homo sapiens

<400> 1335

gaattcgcgg ccgcgtcgac gtacttgaag attaaaggcc ttactgagga gtatccaacc 60
cttacaacct tcttcgaagg agaaataatc agcaaaaaac accctttctt aactcgcaag 120
tgggatgcag atgaagatgt tgatcggaac actcgag 157

<210> 1336

<211> 205

<212> DNA

<213> Homo sapiens

<400> 1336

gaattcgcgg ccgcgtcgac gtcactgggg gtttcttctt tgcttgcttt ctctctcctt 60
accctacccc ccactcacac acacacacac acacacacac acactttcta taaaacttga 120
aaatagcaaa aacctcaac tgttgtaaat catgcaatta aagttgatta cttataaata 180
tgaactttgg atcactttac tcgag 205

<210> 1337

<211> 209

<212> DNA

<213> Homo sapiens

<400> 1337

gaattcgcgg ccgcgtcgac caagcttctg ctatagctcc tcctcaaaaa catttcacag 60
ctcatcacgg cctgtagaat agagcccaaa ctctttttta gtggatatacc aagcccttca 120
tgatctactt ccactatcca gcctcattta ccctgcctct tgtttcttat ctgctatccc 180
actgcaaacg acatgcagct cccctcgag 209

<210> 1338

<211> 207

<212> DNA

<213> Homo sapiens

<400> 1338

gaattcgcgg ccgcgtcgac catttttaag atagaaaaat ttttaggttt ttgttaccaa 60
atctgtcagt cttttacttc attgtatttt tcagttatgg ctagaaagac cttttgtacc 120
acagattata tatttatttt ttctactaac tttgtatctt ttttatgttt caaaatttac 180
atttatctgg aatcagtatt gctcgag 207

<210> 1339

<211> 158

<212> DNA

<213> Homo sapiens

<400> 1339

gaattcgcgg ccgcgtcgac tgattggaaa tcgaactgga aaccggaagg caggagatgt 60
atgctccctt gggatgtatg gggaaatcac acagagctgt tagtacttca gtcatgggat 120
ttgtctctcat gctatgcata tgggcctcac aactcgag 158

<210> 1340
<211> 194
<212> DNA
<213> Homo sapiens

<400> 1340
gaattcgcg cgcgctcgac accagaacag agaggttaat ggtgtccacc acacgtcttt 60
ctcattcttt tctcctttat cttcactctg atttttcttt tgtcattcaa cgcttactcc 120
cttccccata cctcagtcct ccaggtgaca cctgggctct tttctgctg aacagcattc 180
cccaccaact cgag 194

<210> 1341
<211> 236
<212> DNA
<213> Homo sapiens

<400> 1341
gaattcgcg cgcgctcgac agtaatccca tgtacttatt tcttaaatac ctagggaagtt 60
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caaggaatgg cctctccctc cacagaggca acggctgcag agggagcact gtggctgcca 180
tcccagttcc tcttcaaagc caaacagaca cgcgtgactc aaatccaaca ctcgag 236

<210> 1342
<211> 262
<212> DNA
<213> Homo sapiens

<400> 1342
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taagtattta ttcattccata agcatttcag ttttgtctc taaaagataa ggctctcttt 120
ttaaaatcat ttcacacct aagaaaaagt taataattcc ataatatcaa catatagtca 180
tatgtttaga ttgccagttg tttcacaaat gttatgtgtg tgtatacttt tcagttttatt 240
tttgactcag gatccctcag ag 262

<210> 1343
<211> 178
<212> DNA
<213> Homo sapiens

<400> 1343
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atgggtcaaca aattattaca taaataattc atacagttgt gataggtact acaaagaaga 120
cgtataagtt gctatgaaag tttataatag gggaaattta cgtatccttg ggctcgag 178

<210> 1344
<211> 201
<212> DNA
<213> Homo sapiens

<400> 1344
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tccccctgct ttcgtacatt cattcctctt cctctaccct ccagcacatc tacttactgg 120
tgctgtgctg tgtgtcagaa gataaaacag gtgtattatt gtataatgaa ttttgtatag 180
atgtttatga aatggctcga g 201

<210> 1345
<211> 384
<212> DNA
<213> Homo sapiens

<400> 1345

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tctctgggag gtctgtgggc tttaaatgag acagtagaga tgaagtgctt agagctgtgc 180
cccgctcatg gccagtgtgc aatgagatgg tctcagagta ttatggctgg agtcaccact 240
tgtattacca ggaagcccag cctctgtgat tacaggattc caactatggt gactctgcac 300
ctcttccttt ttctcttctt ttctcattcg tcttattacc atttctgaa attaaatcag 360
aacacacagg ggtcgcacct cgag 384

<210> 1346

<211> 250

<212> DNA

<213> Homo sapiens

<400> 1346

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accccgagtc ttgctgacca tggcctctgg aagccctccg acccagccct cgccggcctc 180
ggattccggc tctggctacg ttccgggctc ggtctctgca gcctttgtta cttgcccccc 240
ccagctcgag 250

<210> 1347

<211> 328

<212> DNA

<213> Homo sapiens

<400> 1347

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tctcctctgt ggaagaccct ctgatcgact tcgagggtcg cctccagttt gaagggcggc 180
ccatgcccca gctcacctcc atcatcgta accagctcaa gaagatcatc aagcgcaagc 240
acaccctacc gaattacaag atcaggttta agccgttttt tccataccag accttgcaag 300
gatttgaaga agatgaagag tcctcgag 328

<210> 1348

<211> 139

<212> DNA

<213> Homo sapiens

<400> 1348

gaattcgcg cgcgctcgac ctctggccta tgattgtgtt gtgtcttgca ttaaaaaaa 60
aaatttgaga gtggtagaat tacttctgtt atctgaaata cctgagatgc actttaaact 120
gttgagatgt ctactcgag 139

<210> 1349

<211> 175

<212> DNA

<213> Homo sapiens

<400> 1349

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agccacatcc atgattgatt gtaaggggat tattataatt gatagcttct ttatcatggg 120
attgctagta tcatttgtac ttgctggtct ttttaaagga acagactcac tcgag 175

<210> 1350

<211> 166

<212> DNA

<213> Homo sapiens

<400> 1350

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aaaaagttct aaaatttttt aaaggatggg gtcttgctat attgccagc ctggagtga 120
gtggctattc gcagggtgca tcatcatggc acattacagc ctcgag 166

<210> 1351
<211> 192
<212> DNA
<213> Homo sapiens

<400> 1351
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actaatcttc ctttcataga acctctatct ttttttttcc taaacttgag ttgagtcct 120
tggtatggc atcataaggt aatgggttagc atgtttaaag atattctctc tccaaatccc 180
agcgaactcg ag 192

<210> 1352
<211> 273
<212> DNA
<213> Homo sapiens

<400> 1352
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tttgtttttt tagagacagg gtcttggtct gtcacccagc ctggcatgca gtggttcaat 120
catagctcac tgcagcctca aacctctagg ctcaagcgat cctcccactt cccaaagccg 180
tggtattaca ggcagtagcc acagtgttg gtttattttt gccttcttaa agcatgggtc 240
ctagagcatg gtccctcccc taaaaatctc gag 273

<210> 1353
<211> 201
<212> DNA
<213> Homo sapiens

<400> 1353
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tgctcttcac ctgcttcttg cattttacag tgttctctt taggtattat cttcaccttg 120
acgccggaac ccaaatccag atttatcccc ggtgtttgac tgatgcagct cttgcagatc 180
accttcacatg tcgctctcga g 201

<210> 1354
<211> 211
<212> DNA
<213> Homo sapiens

<400> 1354
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tcccacaaac tttctgggaa gctttaagaa aatgaaaatg ctctcttctc acttttgag 120
ctgctgtacc ctctctctac ctctgtgac tgcagcaggt cagagtgggt ctgagggcct 180
ctctggcacg gctggcctgc cccacctcga g 211

<210> 1355
<211> 218
<212> DNA
<213> Homo sapiens

<400> 1355
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gtttttgttt cctagcttag aatttataat cagattaggt tttggagata aagtatatgt 120
ggtatttttt ttttgagaca gtcttgctct gtcacagggc tggagtgcag tggcgcaatt 180
tcggctcact gcaacctcca cctcctgggt cactcgag 218

<210> 1356
 <211> 203
 <212> DNA
 <213> Homo sapiens

<400> 1356
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 ttactcttac ttgaaacag ctgttttaaa tgactcgtaa tctgcttaaa tctacatgct 120
 ttttggtggt ctcaatccag ttacctacct tccagataat tccctcactg tctgtctctc 180
 tccattctctc tgatgttctc gag 203

<210> 1357
 <211> 151
 <212> DNA
 <213> Homo sapiens

<400> 1357
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 aaagaatatg aggtctcattt tacctcttct tccctcactc ctagtcttcc tttttatatt 120
 tgacattggc agtagttcca gtacgctcga g 151

<210> 1358
 <211> 235
 <212> DNA
 <213> Homo sapiens

<400> 1358
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 gataatctct attttggtgt gcttttttgt aactgtttta aataaatcaa tttgtactgt 120
 atatttgtag ttttgtaga tcccttttgc tgttttacca ttttaagtct ctgtacttgg 180
 ctacacacag attgtatttt tattgttaat gctcttctta tggatagccc tcgag 235

<210> 1359
 <211> 181
 <212> DNA
 <213> Homo sapiens

<400> 1359
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 ctaccacgac ttttttacta acattttaca gttgatccag tccctgtga caacccccct 120
 tgggtgatc atgttgaaga caacttcaga agagctggct tgtccccgtg agcacctcga 180
 g 181

<210> 1360
 <211> 185
 <212> DNA
 <213> Homo sapiens

<400> 1360
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 ttccaattga ttctagactc ttgagtcac agattctggc gctcccgctc tcagtcgctg 120
 acttgccctc agaagcctat cttgggaggc cacacaccag tgtacctaaag gttccctgcc 180
 tcgag 185

<210> 1361
 <211> 278
 <212> DNA
 <213> Homo sapiens

<400> 1361

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gaattcgcg cgcgctcgac aagcatcctg cttttatgag tgtcatatat ttccatatct 60
ttttaaagat attaatcca agttttgttt ttggagtttt cttttgtttt cttcattgtt 120
tctgcctttt gaagtcttct ttcctcttta ttggctttt cagtttattc agggagacgc 180
ttccagccct gtgcagcata ggctgtaatc ctgggagtag ggacaggaaa ggggaatgtg 240
ttgagagtcc ccaaggccac cctcaggttc agctcgag 278

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<210> 1362

<211> 217

<212> DNA

<213> Homo sapiens

<400> 1362

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gaattcgcg cgcgctcgac ccatgatggt gatggcttca ttctcccaa ggaatacaat 60
gtataccaac acgatgaact atagcatatt tgtatttcta cttttttttt tagctattta 120
ctgtacttta tgtataaaac aaagtcaatt ttctccaagt tgtatttgct atttttcccc 180
tatgagaaga tattttgatc tccccaatga actcgag 217

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<210> 1363

<211> 283

<212> DNA

<213> Homo sapiens

<400> 1363

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gaattcgcg cgcgctcgac aatttcactt ttacctgcat acagactgct cgcagaaagt 60
gattaattct tgatccaggc tcttctatct gcacacaacc tggatcagat tctctctgca 120
gttgctcagg agccacatgc gatttgctga gcatgtgcac tgggtggacag cgagccttcc 180
ctcctgcaga ggctacaccg cctccccaca ggctgggtgc agaccagagc tgtcacaggc 240
acttgtagt gtggagtgtc cagagagtag aggcctatctc gag 283

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<210> 1364

<211> 202

<212> DNA

<213> Homo sapiens

<400> 1364

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gaattcgcg cgcgctcgac ccattcttcc gtattgggtg ggggctcctg ttctcatcc 60
tagctttttc ctggaaaagc cgctagaagg tttgggaacg aggggaaagt tctcagaact 120
gttggctgct cccacccgc ctcccgctc ccccgaggt tatgtcagca gctctgagac 180
agcagtatca caggccctcg ag 202

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<210> 1365

<211> 276

<212> DNA

<213> Homo sapiens

<400> 1365

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gaattcgcg cgcgctcgac atttttcatg actctgggct gtgtctactg cagctatgga 60
agttgggacc ttttccggga ggcttatgct gccattgaga cttatcacca gacccacca 120
cccaccttct ctttccgaga aaggatgact cacaagagtc ttgtctacct ctggttcctg 180
tgcagttctg tggcacttgc cctgggtgcc ctaactgtat ggcatgctgt tctcatcagt 240
cgaggtgaga ctagcatcga aaggcacaca ctcgag 276

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<210> 1366

<211> 365

<212> DNA

<213> Homo sapiens

<400> 1366

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tgtaactgta tcaaaaataa aaagctgtca catattttgt aaatttttac cttgtaaagt 120

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cacaaaaata gtttttaaag gaaaaagtac agtattcttt taataaactg gctcacagtc 180
 tggtaggtct acaaccccat agcacaacag gtttatagag atgtatatag aattatagtc 240
 cttatttttt tcctttgctg gaaacctttt ataacagatt aacaatcaac tgcataaata 300
 ttattaatat tttaaaaaga gttaagttgt attttgataa ttcacaaact atcatgcacc 360
 tcgag 365

<210> 1367

<211> 291

<212> DNA

<213> Homo sapiens

<400> 1367

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 cttcttggag ggaacatata tttttttcag agcctctgtg tgctgggtta ctgtatactt 120
 cccttgacag tagcaatgct gatttgccgg ctggtacttt tggtgatcc aggacctgta 180
 aacttcacgg ttcggctttt tgtggtgatt gtgatgtttg cctggctctat agttgcctcc 240
 acagctttcc ttgctgatag ccagcctcca aaccgcaggg ttctccctat a 291

<210> 1368

<211> 242

<212> DNA

<213> Homo sapiens

<400> 1368

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 gcggcgagaa tggcagaagc tggcccaagg tccagagctg gctgaagatg atgctaattct 180
 cttacataag catattgaag ttgctaattg cccagcctct cattttgaaa caagacctcg 240
 ag 242

<210> 1369

<211> 212

<212> DNA

<213> Homo sapiens

<400> 1369

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 ggagaaggaa ctgcaagcca ccaagtcttc atttttcagg gtttgtaac ttcccaaagt 120
 tttcctttga aaataggata atgggtggaa ttttcagagt gattacatac ctcaacattt 180
 ttattaacat acaacaatgg gaaagcctcg ag 212

<210> 1370

<211> 190

<212> DNA

<213> Homo sapiens

<400> 1370

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 ccactgcatg aacatctata caattttaaa aatacttctt cataggatgc tttggccctt 120
 catctattta atcatagcta catacctatt ttttataagt agcagtacac attcaaaagg 180
 gcatctcgag 190

<210> 1371

<211> 158

<212> DNA

<213> Homo sapiens

<400> 1371

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gcggttggca ggaacctgaa aatccacaca cactcgag 158

<210> 1372
<211> 114
<212> DNA
<213> Homo sapiens

<400> 1372
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tccctttttt tttttttgag acagagtctc gccttgtcac ccagggtctc cgag 114

<210> 1373
<211> 193
<212> DNA
<213> Homo sapiens

<400> 1373
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tctgtactac ggaggaacag aatccatgga gatccccacc actgacatcc tggagctgct 120
gtcagctgcc agcctgttcc agctggatgc cctgcagagg cactgcgaga tctgtgtctc 180
ccataccctc gag 193

<210> 1374
<211> 204
<212> DNA
<213> Homo sapiens

<400> 1374
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gtggatggat taaaccagtt gacagttaca actggtagtg aaggattact caaattcttg 120
aactttaaaa acaaaatttt aatccattct gtgagcctca gttcatctcc aaatatcatg 180
ttgctacata gggacttact cgag 204

<210> 1375
<211> 313
<212> DNA
<213> Homo sapiens

<400> 1375
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ggaagtaata ataccagtat ctttttttct gggcaaacct taatcctcca tggcttttagc 120
attcattgat gttttccaca tgaatcgata cctctatgac gttgccagat cctgtttctt 180
tataccgct attccttctg catttgtag ttggcattct actgtaagga ggtgctttct 240
atattattca gtgagttgta atccattact tttattattt atttatttta ttttaaatgt 300
cccatttctc gag 313

<210> 1376
<211> 221
<212> DNA
<213> Homo sapiens

<400> 1376
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gtaaagttag aactccatgg gggagaagaa accctcagga gaggcaggag ctctggcatc 120
aaccatctct ctgccagaa tctcctcca agttgaagct tcaggagttt gggttcttcc 180
agggtagatt attggtccga taagattgga aaacactcga g 221

<210> 1377
<211> 168
<212> DNA

<213> Homo sapiens

<400> 1377

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ttattaatac ctattttatt gattctgttt ctagecctga gtccgctcct aacttgctat 120
aggatctctg gtaaatcatt tcctgtaata agcagctgtc acctcgag 168

<210> 1378

<211> 179

<212> DNA

<213> Homo sapiens

<400> 1378

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acatctacat ttttttcttg tctatttttg tccccttgat aggaaaagct ataattttag 120
gcaggactat acgtcgattt gtagccatgc ttccttcctt tcccttgctc atcgtcgag 179

<210> 1379

<211> 249

<212> DNA

<213> Homo sapiens

<400> 1379

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atcggttttc tacttaaaatt ttgttttagct taagacttct taggacattt gtaaaagcag 120
gttaaattta ataaggtttc tgattttttt ttgtaaccgg agatagtttt tacaagttaa 180
ataacatttc agctaaataa aacatcgcta aataattgat atttgatgaa aatctgctcc 240
tgccctcgag 249

<210> 1380

<211> 253

<212> DNA

<213> Homo sapiens

<400> 1380

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catttagtaa aaatgcaaaa tgtctggca cctttaaaaa catctaaact tgttttgtct 180
tagttcttgc aatgccacc atacacaaa gttattaaat atttctctgt gcatgctcac 240
tactgtctc gag 253

<210> 1381

<211> 142

<212> DNA

<213> Homo sapiens

<400> 1381

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tgccattaaag ccacagactt cagtcacatc agtctactgc tttctccta aacacatcat 120
gttttttcac atcctcctcg ag 142

<210> 1382

<211> 218

<212> DNA

<213> Homo sapiens

<400> 1382

gaattcgcgg ccgcgtcgac aagacaccag atgaaagtac aaaaactaaa gatcagatcc 60
tgacttcaag aatcaatgca gtagaaagag acttgttaga gccttctccc gcagaccaac 120
tcgggaatgg ccacaggagg acagaaagtg aaatgtcagc caggatcgct aaaatgtcct 180

tgagtcgccag cagccccagg caccaggatc agctcgag 218

<210> 1383

<211> 191

<212> DNA

<213> Homo sapiens

<400> 1383

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cagtgggtatt ggaaattatg cccttgctca gcaactgttc atcaaatcaa tccagtcaga 120
acaaattaat gctgttgcac ggaccaactt gggagtgtta tacctcaca atgaaaacat 180
tgcagctcga g 191

<210> 1384

<211> 231

<212> DNA

<213> Homo sapiens

<400> 1384

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tggatttatt tctcgattcg ctgtcggagg agaattgagac cctgggtggag tttgtatttg 120
gaggcctgtg caacctgtgc ccagacaggg ccaacaagga gcacatcctg cagcaggag 180
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<210> 1385

<211> 154

<212> DNA

<213> Homo sapiens

<400> 1385

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tgatttgcca gacatgcac attggctatt gtttggttgt ttttggttt ttttggttt 120
ttgggttact ttgaaatga gccagaacct cgag 154

<210> 1386

<211> 213

<212> DNA

<213> Homo sapiens

<400> 1386

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atcatcctgg tccctggcag cacctttgtg gcctatctgc ctgactacag gatgaaagag 120
tgggtccgcc gcgaagctga gaggtttgtg aaataccgag aggccaatgg ccttcccatc 180
atggaatcca actgcttcga cccaagctc gag 213

<210> 1387

<211> 187

<212> DNA

<213> Homo sapiens

<400> 1387

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ttggaatacc ttaataata taaaaataat gatagtaaatt cttatacttc tgttggtcca 180
tctcgag 187

<210> 1388

<211> 177

<212> DNA

<213> Homo sapiens

<400> 1388

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 tcatgcagca ttgcacttaa aagtccaagc ctggagctgg atttccaagt accattctgt 120
 tttctcactt ggggaatgca gttatggctg gacttgcaca gcggtcaccc tctcgag 177

<210> 1389

<211> 127

<212> DNA

<213> Homo sapiens

<400> 1389

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 cctcgag 127

<210> 1390

<211> 219

<212> DNA

<213> Homo sapiens

<400> 1390

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 tacaaccat caacaatgac aaattttcac agctgcttgt ttattgcttg ttttatatgt 180
 ttacatatct caaaatctgt taaaactgca ggtctcgag 219

<210> 1391

<211> 188

<212> DNA

<213> Homo sapiens

<400> 1391

gaattcgcg cgcgctcgac ttttagatga cgaagtccat aaataactag agaatttttg 60
 ttatctgttg ttaagttgaa atgtataatc atttatcact aaattgcaca ttgcctttat 120
 ttatttgtgc tctgtttttg gtttacagtg taataatacc tcatttaaaa aataaaaacc 180
 gactcgag 188

<210> 1392

<211> 201

<212> DNA

<213> Homo sapiens

<400> 1392

gaattcgcg cgcgctcgac gttgaaaaat gttatttttc actcgatgtt caaaatctcc 60
 taggaaagca ggggcaaaag actttttttt ttttttttcc tcctcatget tggatcatgca 120
 aaagacttta aagagagaaa atgtctcttc cccacttctc tatatacatg ctgggaaaaa 180
 aaagaccgga aggagctcga g 201

<210> 1393

<211> 231

<212> DNA

<213> Homo sapiens

<400> 1393

gaattcgcg cgcgctcgac cgcgcccatt cagactgggtg tcaccgggat catgattgcc 60
 cgtggcgccc tgctcaagcc gtggctcttc acggagatca aggagcagcg gcaactgggac 120
 atctcgtcgt ccgagcgccg ggacatctcg cgggaacttca ccaactacgg cctggagcac 180
 tggggctcgg acacgcaggg cgtggagaag acccggcgct ttctgctcga g 231

<210> 1394

<211> 128
<212> DNA
<213> Homo sapiens

<400> 1394
gaattcgcg cgcgctcgac gagggagact tcaattcaga atttttatcct tcataacatt 60
atagtgtatt taaaagttat atgcagcaaa tgtgtagtat ttttctcatt tcaaccttca 120
ttctcgag 128

<210> 1395
<211> 199
<212> DNA
<213> Homo sapiens

<400> 1395
gaattcgcg cgcgctcgac gcaggatgag attgggaact agaaaacat tttggacccc 60
taaaagtgtt ttgtctacta tctgtacatc attctcttac agctcttact gctgcttttc 120
ctgtcagtta ccccatagct ccaggatatta catgttaact gttcctgaca catgtagaca 180
gaaccaatat gatctcgag 199

<210> 1396
<211> 148
<212> DNA
<213> Homo sapiens

<400> 1396
gaattcgcg cgcgctcgac ctgagattat aggtagtggg caacaattg ttattatgct 60
cacaggcact ataaacattt ttttctact ttttacttgt gtatgcttat cattggaagt 120
aaatataaca gactttgcg ttctcgag 148

<210> 1397
<211> 252
<212> DNA
<213> Homo sapiens

<400> 1397
gaattcgcg cgcgctcgac gagaatataa tccagttaga aaactgctat tttgcaaccc 60
tcagtataat aaatgaaatt gggaaacact aatcaacaaa agtacaattt ttaaagtgtg 120
atctggagac aaacctgtgt ctggtcagag ctaccctacg ctatgaactg cctggctgta 180
catgacccat ccaatttcac agctgaacca aacttactta ccaccacat tagttttaac 240
actacactcg ag 252

<210> 1398
<211> 204
<212> DNA
<213> Homo sapiens

<400> 1398
gaattcgcg cgcgctcgac cctaaaccgt cgattgaatt ctagacctct ctcaacacac 60
tcctcaccgt attttttaac ccatttaaaa aaaaaaatct taaagccaaa attagaaaaa 120
taactcccta cttttccaaa gtgaatttcg tagtttaatg ttatcatgca gcttttgagg 180
agtcttttac actgggaact cgag 204

<210> 1399
<211> 393
<212> DNA
<213> Homo sapiens

<400> 1399
gaattcgcg cgcgctcgac tatgggttta atagtttttt taattttatt agggggaatg 60

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atggttgtct ttggatatac tacagcgatg gctattgagg agtatacctgc thtagctcgt 120
aggctcagctc ctgctccttg cagcaaccgc ctccgatcac catcgccctcc atctcttctc 180
cctgatcgtc cgcgtcctcc agcgaggagg cactccttcc gtgggcccgc cctgaggtct 240
gggcccgcgc tgccacctcc tctctgtcgt cctctccttc ggccgcgggt ggccggcgcct 300
cttctctccc agccggctcc atcgctcccg gcgtcccggg cacactcatg ccccggcagg 360
cctaggtctg gcgtgtgga acagccgctc gag
393

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<210> 1400

<211> 442

<212> DNA

<213> Homo sapiens

<400> 1400

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gaattcgcgg ccgcgtcgac gctggaggca gccgctggag gtagccagca gcatgcacaa 60
aaagctttcc ccactcagtc ctcttccatg ccttccctgaa gccactttaa atactgcaca 120
tctctttaat ccacagggag actgaagatc tctgggattt caaaaggatg tacagcagtg 180
aagatgcctt gagtaggatg ttcacagagg cagccagctc cttatccagc atggccgcct 240
tcgtcaggct cctggagaat attcatccag tcttccagag gcatgacgct ccgcctcttc 300
ttgacagggt gctggcccag gatcaagatt cccctccagg ccaccgctcc acctggggag 360
gcctcagccg cggccgtagc cgcggtggcc tccataacgg ctgcagtcgt ccccgccctag 420
agcctgggtt tggagcctcg ag
442

```

<210> 1401

<211> 282

<212> DNA

<213> Homo sapiens

<400> 1401

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gaattcgcgg ccgcgtcgac gaggtatcgg cttattatat gcttcttctc catgggaagt 60
aatatattaa aattcatttt tatctacagt gtggcccttg gtggggaaaa gctccccatt 120
cctgctctga ggagtgaact ccaatactgg ggcttgccca tgggtgctgc cacaccccag 180
agagaggcga tgcaagcctg ctcccaggcc tgcctctcct cctcgacaaa ctggccatct 240
gttctctggg aaaaagagca gccttctgt atcttctctg ag
282

```

<210> 1402

<211> 330

<212> DNA

<213> Homo sapiens

<400> 1402

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gaattcgcgg ccgcgtcgac gctttcctct tttgtgataa tccagtccca agttccttat 60
tattctgaat aaatgaaata gcttctggta gacagtaatt ttctacatga ggagggtgatt 120
cctgcattgag ataatcagca atgtattctg ttctcaagca gtacacgttc tgggcagcag 180
cttctgctat attaactcct gagtcattct gtttcagttt attcaagtca gaaaaaagat 240
gtgtggcctc tttaaataaa ggtacagaat gaccaggtag cacctttgct cctcctgact 300
gaagaaggcg tttgaagcct gcttctcgag
330

```

<210> 1403

<211> 266

<212> DNA

<213> Homo sapiens

<400> 1403

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gaattcgcgg ccgcgtcgac ctgggtgttt ctcatctttg tttatctcta ctctgcagtc 60
tccccacccc tacttgatg tttgttggt tgtttattgc attttcttat cctgcctggt 120
tctcaccctg tttttctcgc atgggcgtat caaccttgct gggtgtgggt ggccctccgc 180
ctagctctga ccctggcctg gccttctggc ttccaccag ctcaatccct gtctttgttg 240
cttcgttggt ccagagttcc ctcgag
266

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<210> 1404

<211> 256
 <212> DNA
 <213> Homo sapiens

<400> 1404
 gaattcgcgg ccgcgtcgac cctaaaccgt ccccatgaac tccgcactca tcaagtggct 60
 gtacctgctt gattttcttc gggcccccaa ctccaccaac ctcatcagcg actttctcct 120
 gctgtgtgac gcctcccagc agtggcaggt gttctcagct gagcgcacag aggagtggca 180
 gcgcatggct ggcgtcaaca ccgaccgctt ggagccgctg cgggggggagc ccaaccccgct 240
 gcccaacttt ctcgag 256

<210> 1405
 <211> 273
 <212> DNA
 <213> Homo sapiens

<400> 1405
 gaattcgcgg ccgcgtcgac ggtggcatct gagaggctgg tcgtggactg tggttggggg 60
 aggtggggagc tgttttaacc gtgtgcccc tctcctgtgc cggcgtgggc atccccggg 120
 gcagtgaac gcgggcgctc ctccagcttc cgagtccagc cagcctgggc gcggggcgcc 180
 gccccgaga cccccagga gtccgttctt ccctgggtac gtggactgtg gagctggtct 240
 cttgtggctc agcgccgtgc ggaggtactc gag 273

<210> 1406
 <211> 271
 <212> DNA
 <213> Homo sapiens

<400> 1406
 gaattcgcgg ccgcgtcgac agagccgtct ttctttctcc aacagttgcc tttccatgtt 60
 ccaacaaatg aaactgttta ccattctcca tgggccttgt cctctctcac ttctgggcct 120
 ttgcacaagt tatttctctt gtaaaacact tcttccaatc ctacctaaact ttgttttccc 180
 ctgggggctc ccacagcacc cagtacgcat agctcaaagc actgtcatac cttctgtgat 240
 ggcctcctca gtagaccatg agttcctcga g 271

<210> 1407
 <211> 395
 <212> DNA
 <213> Homo sapiens

<400> 1407
 gaattccggc ccgcgtcgac aagtgccaga ttcttttaggg gctccaagag ttcattctgt 60
 ccacacagaa ggacggctgc agcatgaatg gccatttctg tcaccgttcc atcaagggtt 120
 ctgtcactag gccccgcctt caacaatggc acagaattgt ccacgagcga tgttgcaaaa 180
 cggctgatat caggaggtga aaggatcttg cattcgccaa tgaatttgct cacagcttca 240
 cattgtcttg gcgtggggtg gaggtctgca ttgtgggata tgtacaaaat agccacctct 300
 ctaaacagtg ttaacaggaa gtaggctgac tgctggcttt ggggggtctt gcaggccttc 360
 agagcagttt taatgcccag tggcttgac tcgag 395

<210> 1408
 <211> 306
 <212> DNA
 <213> Homo sapiens

<400> 1408
 gaattcgcgg ccgcgtcgac cgagatgttg ctgtgtctgc tactggcgcc actcttcttc 60
 cgcccccg ggcggggcg ggtgcagacc cccaacgcca cctcagaagg ttgccagatc 120
 atacaccgc cctgggaagg gggcatcagg taccggggcc tgactcgga ccaggtgaag 180
 gctatcaact tctgcccagt ggactatgag attgagtatg tgtccgggg ggagcgcgag 240
 gtgggtgggg ccaagggtcc caagtgcctg gccaacggct cctggacaga tatggacaca 300

ctcgag

306

<210> 1409

<211> 368

<212> DNA

<213> Homo sapiens

<400> 1409

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gaattcgcg cgcgctcgac gccatgcacc gtctaccgct gctgctcctg ctgggcttgc 60
tgctcgcagg ctccgctgcc cctgcgcgcc tcgtcccga ggcctttcc caacttggtg 120
gcttctcctg ggataactgt gatgaaggaa aggaccctgc agtgatcaaa agcctcacga 180
tccaacctga cccattgtg gttcctggag atgtagtcgt cagccttgag ggcaagacca 240
gcgttcccc cactgctcct cagaagggtg agctcaccgt ggagaaggaa gtggctggct 300
tctgggtcaa gattccttgt gtagaacagc taggcagctg tagctacgag aacatctgtg 360
acctcgag

```

368

<210> 1410

<211> 340

<212> DNA

<213> Homo sapiens

<400> 1410

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gaattcgcg cgcgctcgac ggcattgggg gacagaggag gtgggacctg gcagaccac 60
agctcccaag ctgggggtccc ggaggcagag tgacaatgca tggctgtgtg ggagccaggc 120
aggcggtgac gtggcagagc tgccagcagg ggccaagag actgcagcag gttggtgctc 180
acagtggatc tgagggatgg gcgtgcgtgg cagggccttg gccatggccc ctgaccaacc 240
cctgtgcacc aaacaccaca ctgagctcag aatccgggca gagagggaac cactggtaca 300
gtgaggccaa ggcacacgca gccgggcctg cagactcgag

```

340

<210> 1411

<211> 276

<212> DNA

<213> Homo sapiens

<400> 1411

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gaattcgcg cgcgctcgac taaaccgtcg atgaattctc ccaccagca gctgaaggga 60
gaaagacgag gaggcaggga gcagacgagg aggtggggag caggcagccc gggcctcaga 120
ggacacatgg ccttcccccg ctggcacccc cacatcaggg ccaccagggg actgctcaca 180
cccaggggtt gccgcctctg gacctggctg tccctgggtc tgcagacctc aggagtgacc 240
tgggcttaca gaggtactgg caaggaggga ctcgag

```

276

<210> 1412

<211> 281

<212> DNA

<213> Homo sapiens

<400> 1412

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gaattcgcg cgcgctcgac ctcattgcc a tgatggtatg gagcatcacc taccacagct 60
ggctgacctt cgtactgctg ctctgggcct gcctcatctg gacagtgcgc agccgccacc 120
aactggccat gctgtgctcg cctgcatcc tgctgtatgg gatgacgctg tgctgcctac 180
gctacgtgtg ggccatggac ctgcgccctg agctgccacc caccctgggc cccgtcagcc 240
tgcgccagct ggggctggag cacacccgct acccctcga g

```

281

<210> 1413

<211> 450

<212> DNA

<213> Homo sapiens

<400> 1413

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gaattcgcg cgcgctcgac ctaaaccgtc gattgaattc tagacctgac ccgttccgct 60

```

```

gtgtacaccc tgaacctggc actggcggac ctgatgtatg cctgttcaact acccctactt 120
atctataact acgccagagg ggaccactgg ccttcggag acctcgccctg ccgctttgta 180
cgcttcctct tctatgcaa tctacatggc agcatcctgt tctcacctg cattagcttc 240
cagcgctacc tgggcatctg ccacccctg gcttcctggc acaagcgtgg aggtcgccgt 300
gctgcttggg tagtgtgtgg agtcgtgtgg ctggctgtga cagcccagtg cctgcccacg 360
gcagtctttg ctgccacagg catccagcgc aaccgcactg tgtgctacga cctgagccca 420
cccatcctgt ctactcgcta ccactcgag 450

```

<210> 1414

<211> 345

<212> DNA

<213> Homo sapiens

<400> 1414

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gaattcgagg ccgcgtcgac cgattgaatt ctagacctgc ctgcacccc caatctcaac 60
cccaaccccc tcatcaacgt gcgcgaccgg ctcttcacag cgctgttctt caagatggct 120
gtcacctatt cgcggctctt cccgcccggc ttccgcccgc tcttcgagtt ctctgtgtg 180
ctcaaggccc tgtttgtgct cttcgtcctg gccacatcc acatcgtctt ctcccgtctg 240
cccatcaact gccggagca tttctgtgac agcggcggc gcgggagctt cccgggcctg 300
gccgtggaac caggcagcaa cctggacatg caagatgagc tcgag 345

```

<210> 1415

<211> 355

<212> DNA

<213> Homo sapiens

<400> 1415

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gaattcgagg ccgcgtcgac acttttttct ctttctgtat cctgttcaag aaatagtgtg 60
ctactccaag gtcattgaga tgttttttct taaatgcttt attgtcttgt cttttatttt 120
ttatatctat ggtctatttg gtatggcttc gtgtgtgtgg tgtgaggtag ggattgagat 180
tctttttttt ccattgggat atctgattga ccagcatca ttttctaaaa gatgcctttc 240
ctcattgcac tgcggcgcct cctgtgtgct tttgacaggg atgacagga tgaggatgat 300
aaagaatagg catagcgtgt ctttctcttg tgagacacag ggactccaac tcgag 355

```

<210> 1416

<211> 412

<212> DNA

<213> Homo sapiens

<400> 1416

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gaattcgagg ccgcgtcgac aactcgggtga acaactgagg gaaccaaacc agagacgcgc 60
tgaacagaga gaatcaggct caaagcaagt ggaagtgggc agagattcca ccaggactgg 120
tgcaaggcgc agagccagcc agatttgaga agaaggcaaa aagatgctgg ggagcagagc 180
tgtaatgctg ctgttgctgc tgccctggac agctcagggc agagctgtgc ctgggggcag 240
cagccctgcc tggactcagt gccagcagct ttcacagaag ctctgcacac tggcctggag 300
tgacatcca ctagtgggac acatggatct aagagaagag ggagatgaag agactacaaa 360
tgatgttccc catatccagt gtggagatgg ctgtgacccc ccagaactcg ag 412

```

<210> 1417

<211> 110

<212> DNA

<213> Homo sapiens

<400> 1417

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gaattcggcc aaagaggcca ttcaaaaagg ggttaagagt taaaatgggtg tgtgcagctg 60
taacactgga gctatcttat ctcttaatga cagttaagga gagtctcgag 110

```

<210> 1418

<211> 105

<212> DNA

<213> Homo sapiens

<400> 1418

gaattcggcc aaagaggcca ttcaaaaaaa cgtgagaagt atttttgtac cctgtgtaac 60
aaaatattta tgcatacataa aggatttttc atatgcgtac tcgag 105

<210> 1419

<211> 103

<212> DNA

<213> Homo sapiens

<400> 1419

gaattcggcc aaagaggcca ttcaaagacc tgccctgaga ggtctcgagg caggtctaga 60
attcaatcgc ctcagaaggc caaagaggcc attcgtcttc gag 103

<210> 1420

<211> 105

<212> DNA

<213> Homo sapiens

<400> 1420

gaattcggcc aaagaggcca ttcaaaattt gactgtttat aaagaaagt gctttatttc 60
tttaaacatc ttcaaaagat gatcctttct tgtcacattc tcgag 105

<210> 1421

<211> 111

<212> DNA

<213> Homo sapiens

<400> 1421

gaattcggcc aaagaggcca ttcaaaaatg tatggaaatt caactaattt ttggtgctgt 60
tattctattc ttcaaatcca ctgcatatgt ttttagttc cagtactcga g 111

<210> 1422

<211> 125

<212> DNA

<213> Homo sapiens

<400> 1422

gaattcggcc aaagaggcca ttcaaaaaaa agattcagca aattgcttaa aatcgaggta 60
actagcaagc atatatcaag ggatacatga ctcggttct gtctagtttc aaagccgtac 120
tcgag 125

<210> 1423

<211> 103

<212> DNA

<213> Homo sapiens

<400> 1423

gaattcggcc aaagaggcca ttcaaaaaat ttgaattcag aagataagca ggtaaaattt 60
atcacaagat tgtgtggtaa tgagagtga gttggctctc gag 103

<210> 1424

<211> 126

<212> DNA

<213> Homo sapiens

<400> 1424

gaattcggcc aaagaggcca ttcaaaaatg aaatgcattt ctagtgtgaa cttaattgcc 60
acttggttg atattatttt ccttagaatt gttggaatag aggagagagg aaggagagcaa 120

ctcgag

126

<210> 1425

<211> 141

<212> DNA

<213> Homo sapiens

<400> 1425

gaattcggcc aaagaggcca ttcaaagatt gtaaatagct tacaatttac aaataataaa 60
tatacaatgc tgtttatcat aaaaatccac ttagccaatt ggttcttaca aaatgttttt 120
gttaatatatt gcgaactcga g 141

<210> 1426

<211> 133

<212> DNA

<213> Homo sapiens

<400> 1426

gaattcggcc aaagaggcca ttcaaaaaca ggaatttgag cacaagatga gaaaatgtgt 60
tgccccctta gcgctggtgg gctggatggc ggccacagca cacgggggca cctcattccg 120
cagggagctc gag 133

<210> 1427

<211> 106

<212> DNA

<213> Homo sapiens

<400> 1427

gaattcggcc aaagaggcca ttcaaagtc gatgaaaatc tttttattct caaaattggt 60
tttcagttcg gtaaatattt tgagtgtgt tgcacgcggt ctcgag 106

<210> 1428

<211> 109

<212> DNA

<213> Homo sapiens

<400> 1428

gaattcggcc aaagaggcca ttcaaaataa ttggaatata cttttcttaa aaaaaaggaa 60
cagttagttc tcacttagaa tgaaagtcc atatatgcat tggctcgag 109

<210> 1429

<211> 190

<212> DNA

<213> Homo sapiens

<400> 1429

gaattcggcc aaagaggcca ttcaataaaa acacagtaag tactcagaaa ctacttgaag 60
agtgcagtta tcagtagaga tgatcgaaac atttggtttt ctagggaata tttttgcctt 120
ttttcttcca gaatcctctg gttataatgt gctcactgct aggtcaccag tcataaaaaca 180
taaactcgag 190

<210> 1430

<211> 111

<212> DNA

<213> Homo sapiens

<400> 1430

gaattcggcc aaagaggcca ttcaaaaaata atgatatttg gcctctactt tgtcttagct 60
gttaactgt ttttagtatt tttgttaaat atttgcaaag ggaaactcga g 111

<210> 1431
<211> 103
<212> DNA
<213> Homo sapiens

<400> 1431
gaattcggcc aaagaggcca ttcaaaaaag agaaggcttc ttccttattg atatcatggt 60
atgcattaat tccatttggt actattgtgc acaggccctc gag 103

<210> 1432
<211> 178
<212> DNA
<213> Homo sapiens

<400> 1432
gaattcggcc aaagaggcca ttcaaaaaag aaagcagctg ggactaatga actttacatt 60
agccatattc cattatttca gcttaagtca aatgtcggtc ctcatgagga aactggcttt 120
gacaggagct acgctaatta ccacttacca acctttaatt tctgggcaaa acctcgag 178

<210> 1433
<211> 115
<212> DNA
<213> Homo sapiens

<400> 1433
gaattcggcc aaagaggcca ttcaaaagtat ggggtttctc actctgcttt tcttcctgtg 60
gggcttcggg gtgctgtact gttgtccctc catttcagc aggtatcacc tcgag 115

<210> 1434
<211> 102
<212> DNA
<213> Homo sapiens

<400> 1434
gaattcggcc aaagaggcca ttcaaaaatg cagtatttat tctttgtagg cataatgtgt 60
ttgtcactga caagcattca tgttcatacc actagtctcg ag 102

<210> 1435
<211> 125
<212> DNA
<213> Homo sapiens

<400> 1435
gaattcggcc aaagaggcca ttcaaaaaaa atagaaagta aatagttcta agaattattct 60
ggcataaatt atttttattt agccaataaa atagcctcca aatgtatatc tcagttgccc 120
tcgag 125

<210> 1436
<211> 104
<212> DNA
<213> Homo sapiens

<400> 1436
gaattcggcc aaagaggcca ttcaaaaagt attgcttaat agaaagtgag tagaacttat 60
attcgatcat gttattgagc acatacttac gggcagttct cgag 104

<210> 1437
<211> 125
<212> DNA
<213> Homo sapiens

<400> 1437

gaattcggcc aaagaggcca ttcaaaagga ggtcaccaag aaacatcagt atgaaattag 60
gaattgttgg ccacctgtat tatctggggg gatcagtcct tgcattatca tggaaacacc 120
tcgag 125

<210> 1438

<211> 206

<212> DNA

<213> Homo sapiens

<400> 1438

gaattcggcc aaagaggcca ttcaaaaaaa gcagaatgtt ttcctcagaa ggccaaagag 60
gccattcaaa aaaagcagaa tgttttcctc agaaggccaa agaggccatt caaaaaagca 120
gaatgttttc ctcagaaggc caaagaggcc attcaaaaaa gcagaatgtt ttcctcagaa 180
ggccaaagag gccattcaaa ctcgag 206

<210> 1439

<211> 104

<212> DNA

<213> Homo sapiens

<400> 1439

gaattcggcc aaagaggcca ttcaaaaaga taaaattaaa aagccagaca tactttctat 60
caagctgcgt aaagagaaac atgaagtaca aatggatcct cgag 104

<210> 1440

<211> 120

<212> DNA

<213> Homo sapiens

<400> 1440

gaattcggcc aaagaggcca ttcaaacctt cagaaggcca aagaggccat tcaaaccttc 60
agaaggccaa agaggccatt caaacctca gaaggccaaa gaggccattc aaacctcgag 120

<210> 1441

<211> 119

<212> DNA

<213> Homo sapiens

<400> 1441

gaattcggcc aaagaggcca ttcaaaaaca tattttaagc caagtttttag gtgtattttt 60
tgaatcttgg ttataaaccc aatttttaag ggcgatgtat gccagcgttg ttactcgag 119

<210> 1442

<211> 123

<212> DNA

<213> Homo sapiens

<400> 1442

gaattcggcc aaagaggcca ttcaaaagta ttttgaactt agctcatcaa aggccataaa 60
taatctgtaa acatgtttta taaaaaaaaa atcactaaag ctgatcccaa agagccactc 120
gag 123

<210> 1443

<211> 115

<212> DNA

<213> Homo sapiens

<400> 1443

gaattcggcc aaagaggcca ttcaaaagatt aataatgagc ttttgtttta cgtttttgag 60

cctgcttcct gcatgcataa aattaatact tcagccctct tccaaagaac tcgag 115

<210> 1444

<211> 128

<212> DNA

<213> Homo sapiens

<400> 1444

gaattcggcc aaagaggcca ttcaaaccat tcaaacctca gaaggccaaa gaggccattc 60
aaaccattca aacctcagaa ggccaaagag gccattcaaa aaaaagtaaa acttgctgct 120
gactcgag 128

<210> 1445

<211> 110

<212> DNA

<213> Homo sapiens

<400> 1445

gaattcggcc aaagaggcca ttcaaacaaa ttgattgta cttataagaa caatacattg 60
ttttataat gttaatattc tgttttgcct ttataattcc cacactcgag 110

<210> 1446

<211> 118

<212> DNA

<213> Homo sapiens

<400> 1446

gaattcggcc aaagaggcca ttcaaaagac ctgcattcta gctgttgga caactgaccg 60
aacgtctagc accacactct cactaagaat ttcactgatg aggcggtggt ttctcgag 118

<210> 1447

<211> 121

<212> DNA

<213> Homo sapiens

<400> 1447

gaattcggcc aaagaggcca ttcaaaaagg agttgtgtgt gtgttttgca tacaacttta 60
caatttcata gttgaaagct gttacaaaat gaaagttttg tgtatggtag gaattctcga 120
g 121

<210> 1448

<211> 152

<212> DNA

<213> Homo sapiens

<400> 1448

gaattcggcc aaagaggcca ttcaaaaatt aactgaggca ggtgatcggt tttttaagct 60
gattagggaa acagtatata agaacttact taactcataa taaaactaaa attcaacagg 120
ggagagttat gatttttttg ctgctctcg ag 152

<210> 1449

<211> 129

<212> DNA

<213> Homo sapiens

<400> 1449

gaattcggcc aaagaggcca ttcaaaaaaa atgaggattg ccttccttgt atgcgctttt 60
taccttgact acctgaattg caagggattt ttatatattc atatgttaca aagtcagcaa 120
cgctcgag 129

<210> 1450
<211> 133
<212> DNA
<213> Homo sapiens

<400> 1450
gaattcggcc aaagaggcca ttcaaaaaag agtaggctat aagggaagat tgtcaatatt 60
ttgtggtaag aaaagctaca gtcatttttt ctttgcactt tggatgctga aatttttccc 120
atggatcctc gag 133

<210> 1451
<211> 101
<212> DNA
<213> Homo sapiens

<400> 1451
gaattcggcc aaagaggcca ttcaaaaatt acgcattttc tttatcccca gaatagacat 60
acataaaaaat aatgcatact aagtctctgg caattctcga g 101

<210> 1452
<211> 142
<212> DNA
<213> Homo sapiens

<400> 1452
gaattcggcc aaagaggcca ttcaaaagta taaaacaagc aaagaaggga gtgtaatggg 60
agttacagta tcccggttg caatgttgc tcaactgcaa gctctgtcgc aggcctgcaa 120
ttattctgaa ggggcgctcg ag 142

<210> 1453
<211> 102
<212> DNA
<213> Homo sapiens

<400> 1453
gaattcggcc aaagaggcca ttcaaacata aacataagca taaacataag aaacacaaaa 60
gaaaagaggt tattgatgct tctgataaag aggggtactcg ag 102

<210> 1454
<211> 111
<212> DNA
<213> Homo sapiens

<400> 1454
gaattcggcc aaagaggcca ttcaaacata atgtcagaat taatttaaac aaattataat 60
taatgtaata tgattttagg aaagatgaaa cactttatga gagcctcga g 111

<210> 1455
<211> 132
<212> DNA
<213> Homo sapiens

<400> 1455
gaattcggcc aaagaggcca ttcaaaaata aaattattga acagcttagc cctcaagctg 60
ccaccagcag agacatcaac aggaaactag attctgtaaa acgacagaag tataataagg 120
aacatcctcg ag 132

<210> 1456
<211> 136
<212> DNA

<213> Homo sapiens

<400> 1456

gaattcggcc aaagaggcca ttcaaaaaat aaagtgactg aactgtcaga tcaacaagat 60
caagctatcg aaacttctat ttggaattct aaagaccatt tacaagtaga aaatgatgct 120
tacctgatt ctcgag 136

<210> 1457

<211> 104

<212> DNA

<213> Homo sapiens

<400> 1457

gaattcggcc aaagaggcca ttcaaaaaata tgatcgaaga aataaagacc ccagcctcta 60
ccccgtgctc tggaactcct caggcttcac ccatggctcct cgag 104

<210> 1458

<211> 111

<212> DNA

<213> Homo sapiens

<400> 1458

gaattcggcc aaagaggcca ttcaaaaaatc gaaaaggaaa atactttaac gttgaaagag 60
ttggtcagta cttgaaagat gaagatgatg atcttgtgtc accccctcga g 111

<210> 1459

<211> 129

<212> DNA

<213> Homo sapiens

<400> 1459

gaattcggcc aaagaggcca ttcaaaaaag gaagaaaaaa acagatttac accacagata 60
gtgatgagat ttcatatatt gttaatcgta ttgctcctca gccaaaggat gaaaaaccaa 120
caactcgag 129

<210> 1460

<211> 111

<212> DNA

<213> Homo sapiens

<400> 1460

gaattcggcc aaagaggcca ttcaaaaaaa aagaaagtta tttctttgtc ttaaagaatt 60
tttaaaaaat tagtcatgag acttattcat cttccaggg aacttctcga g 111

<210> 1461

<211> 173

<212> DNA

<213> Homo sapiens

<400> 1461

gaattcggcc aaagaggcca ttcaaaaacta aaataaaaca tatgtgtcta tggttttcaa 60
ttggagtagt ctttcttact ttcccccctc cctcttttgg ttctcctaac cagcttagag 120
gacccaaaga gagcttaggg atagacacca gaatactctg tggaggctc gag 173

<210> 1462

<211> 141

<212> DNA

<213> Homo sapiens

<400> 1462

gaattcggcc aaagaggcca ttcaaaaatc aagagtttga gagcgccgg ctgaatgaga 60
cactttcatc attttctgat gacaataaga ttacaattag actggggaga gcacttaaaa 120
aaggagaata cagagctcga g 141

<210> 1463
<211> 123
<212> DNA
<213> Homo sapiens

<400> 1463
gaattcggcc aaagaggcca ttctgaggcg gttggtgggt caatggtgaa gatacagtct 60
ttttttaa at cccctctctt gctgaactcc tctggtggaa ttgtccatgg caggtcactc 120
gag 123

<210> 1464
<211> 105
<212> DNA
<213> Homo sapiens

<400> 1464
gaattcggcc aaagaggcca ttcaaatatg tatcggattg ttttaatgtt atatattgga 60
ttgtattcga tgttacaaaa ccaatattct atggagtcctc tcgag 105

<210> 1465
<211> 117
<212> DNA
<213> Homo sapiens

<400> 1465
gaattcggcc aaagaggcca ttcaaagtat atcacacatt tagaagtaca aattaatcca 60
ttttgcttta tgaattcatt ttacattat ataacttctc ttacattctg tctcgag 117

<210> 1466
<211> 102
<212> DNA
<213> Homo sapiens

<400> 1466
gaattcggcc aaagaggcca ttcaaagaat tgaacattt taatttcaaa ttcaaataga 60
acatttaaaa tgatttcatt attattaccc atactcctcg ag 102

<210> 1467
<211> 118
<212> DNA
<213> Homo sapiens

<400> 1467
gaattcggcc aaagaggcca ttcaaaaaaa ttttgcata tacttatggg taatatcttt 60
ttcatatatt atttatcaaa gtatgaagtt gaggattttg cttgtaccac tcctcgag 118

<210> 1468
<211> 107
<212> DNA
<213> Homo sapiens

<400> 1468
gaattcggcc aaagaggcca ttcaaaaatc ataaatatag aaacagtagt aatacagctg 60
acattaccat ttaattttat attatgaaag caaatcatct gctcgag 107

<210> 1469

<211> 433

<212> DNA

<213> Homo sapiens

<400> 1469

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gaattcgcgg ccgcgctcgac ccaaccccag gttatcttcc cctttgtctt ccagccccc 60
agaaacagct acgactcaac ctacccaatc atttcacatc cagattgcc a ctgtctctag 120
ttcaggtctc ttgggactgg cactcagaaa tctcataata aatcctcttg aggtcttctca 180
tacactcgtc ttcttccaat cttctttccc tcaaaatctc atattttggt tccacttcac 240
ccaccgtcat tctccatata actcccagga gttaggcaaa aagccccctc cgttcttccg 300
tatgttaaac ttagaatcac tctgttcctt gctctgcgtt tctatttttt gttttctctc 360
atttactagt agcttaacac tttctaacag tgttcttatt attgatacgt atctatctct 420
tccaaagctc gag

```

433

<210> 1470

<211> 158

<212> DNA

<213> Homo sapiens

<400> 1470

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gaattcgcgg ccgcgctcgac cctgtgtgtt ttctgttact tgctagccac aaagtccctg 60
caaacagaaa ctttagatcc actgcctcct ttactcctcc tctctatagc gctgtgaagc 120
aaatgtctct catcatcccc attgcacaca cgctcgag

```

158

<210> 1471

<211> 270

<212> DNA

<213> Homo sapiens

<400> 1471

```

gaattcgcgg ccgcgctcgac ctaaaattct gatttgcatt gtgggtttta ggggttcagat 60
tagcaagtgg gattgttttt tagcacttaa atccctcact tcatgctctg tttgcacaaa 120
tctaaagagg cactggtatg tctaaagagg cactggtatt gtttattacc tctagtgtga 180
tttgactttg ggattgtaga gaaaaataat ttccctttgt gggatggggg aagaatccca 240
tgccagtatt catcatatgg gaccctcgag

```

270

<210> 1472

<211> 359

<212> DNA

<213> Homo sapiens

<400> 1472

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gaattcgcgg ccgcgctcgac ctaattatgt aattatgtaa gctagctttt catgtttatg 60
tatgtatggt gtcccttctg gttattttcc tccctcttgg tttttgaatt agtgttaaat 120
agaatactgt ctgattctct aaaatatatt catttccatc atggttataa caaatttgct 180
gcatgcccaa actgacaaca gcaatcactg aggggaacagg ttttgaatct ttcttttctg 240
ttatgaagtt tatcgtctct acttgcttga gatttttggt attttggggg tttgggggtg 300
ctttttgttt tgtttttggc aaatgtaaca tgaaagcaga tgctgcagct tctctcgag 359

```

<210> 1473

<211> 407

<212> DNA

<213> Homo sapiens

<400> 1473

```

gaattcgcgg ccgcgctcgac gaaatcatgg actaccagag cagacttaag aatgctggtg 60
aagagtgcga gagcctcagg ggccagcttg aggagcaagg ccggcagctg caggctgctg 120
aggaagctgt ggagaagctg aaggccaccc aagcagacat gggagagaag ctgagctgca 180
ctagcaacca tcttgcagag tgccaggcgg ccatgctgag gaaggacaag gagggggctg 240
ccctgcgtga agacctagaa aggaccacga aggaactcga aaaagccaca acaaaaatcc 300

```

aagagtatta caacaaactc tgccaggagg tgacaaatcg tgagaggaat gaccagaaga 360
 tgcttgctga cctggatgac ctcaacagaa ccaagaagta tctcgag 407

<210> 1474
 <211> 521
 <212> DNA
 <213> Homo sapiens

<400> 1474
 gaattcgcgg ccgcgtcgac attgaattct catgcctcac ctctcctcag tagctgggat 60
 tacaggcgtg caccaccaca ccttgetaat ttttgatttt ttttagtaga gacggagttt 120
 tgccgtgttg gccaggctgg tctcaaactc ctggcatcaa gtaatctgcc tgcctcagct 180
 tcccaaagtg ctgggattac aggcataagc caccgtgccc ggcctatttt cggcattttt 240
 atatcctgtt gtatttaggc tctttttgta gacctcctat ttctagatct tttaaaaatc 300
 caatcccaga gttgtgtgtc tttttttctc tctctcattt aatagggtga attttctttt 360
 cctagtttga aatgtacaca tttcattgtg tttcagttaa aattttggtc attatcccaa 420
 accaatctat gcttacattt atacgttttg tttcttttat tgttggtata agtatcttta 480
 tatcactcac tgccttcaac ataaatacct tgacactcga g 521

<210> 1475
 <211> 381
 <212> DNA
 <213> Homo sapiens

<400> 1475
 gaattcgcgg ccgcgtcgac agaagttgct ggtcttgaca tgaatatcag ccaatttcta 60
 aaaagccttg gccttgaaca ccttcgggat atctttgaaa cagaacagat tacactagat 120
 gtgttggtcg atatgggtca tgaagagttg aaagaaatag gcatcaatgc atatgggcac 180
 cgccacaaat taatcaaagg agtagaaaga ctcttaggtg gacaacaagg caccaatcct 240
 tatttgactt ttcactgtgt taatcaggga acgattttgc tggatcttgc tccagaagat 300
 aaagaatatc agtcagtgya agaagagatg caaagtacta ttcgagaaca cagagatggt 360
 ggtaatgctg gcggtctcga g 381

<210> 1476
 <211> 118
 <212> DNA
 <213> Homo sapiens

<400> 1476
 gaattcgcgg ccgcgtcgac cttaggctcag gttctgtcaa gttaccaaca gaagctactg 60
 attgtaaaaa ttcaattaca ctcttatcct gtcaagtaaa atggtaggca gtctcgag 118

<210> 1477
 <211> 179
 <212> DNA
 <213> Homo sapiens

<400> 1477
 gaattcgcgg ccgcgtcgac tggaatcata ggatgtggag gatggctactc atacactgtg 60
 tctgcctctg ggtgggggcc acaggactgg ttcagtcctg ctctggatgg agtcagtcag 120
 ttgccagaat gcagaagtcg gaaaaacatc tcaaaagacc agtcttgcca gagctcgag 179

<210> 1478
 <211> 279
 <212> DNA
 <213> Homo sapiens

<400> 1478
 gaattcgcgg ccgcgtcgac taggagtga a tatgtgggtc ccttttggtta tgcacaatag 60
 aattgtttctc ccaatttttt ttttttttgc ctgtcacttc atactctatt ctatttactt 120

ccctttctag ttagtaaggc atgttgggtg aactccccct ttttggcaaa aaggcattta 180
 ccttttctct cccattacc actaccagca caccaatata gattttcccc ctgctcagg 240
 gaggccatga ctggaggagg gggtaaggag cctctcgag 279

<210> 1479
 <211> 144
 <212> DNA
 <213> Homo sapiens

<400> 1479
 gaattcgcgg ccgctcgac gtcttgggtc agattataaa aattacaatt gattacataa 60
 aacttaatta accttttctt tctctctcat agatactctt catatcaatt tatgtatttc 120
 caagtactat acccattact cgag 144

<210> 1480
 <211> 209
 <212> DNA
 <213> Homo sapiens

<400> 1480
 gaattcgcgg ccgctcgac gccagcatgg tcaacttctg gcgagagctc tcttcttggg 60
 atgtaaatgc ccacttctc atgtcttctc aggaaggaaa ccaacaaata ggtctctctc 120
 tctctctctc tttctctctc ctctctctc ctcttctctc ctctctctc accatctctc 180
 tcttctctc cctctctctc gccctcgag 209

<210> 1481
 <211> 532
 <212> DNA
 <213> Homo sapiens

<400> 1481
 gaattcggcc aaagaggcct aagtgaactt agtagaagct attgagaaaa gactgatcag 60
 ccttgaactg gcaaatatga tccaaataga tagttcagag ttcagcgatc acagggctca 120
 gattgaaaag caagaaggga ttgaagtgtg tgcattacaa aatgaatttc taggaaagga 180
 tatgttaatt gcttgaatc agactgctga aatgagttgt aataaagtag aagagagtga 240
 gagattattt caagttgaaa atcagtctgc acaagaaaag gttaaagtga gattttctga 300
 tggggagcag gcaaaaaaga gcagggaat ttccttaaag gaatttgggt gcaaggatca 360
 acgtaagcca agaattgtct cagatgctaa agaatttctc agtatcataa atcctcataa 420
 tcttaaagggt aaatccttgg gccaaagtgc attgacacac ccttactctg aatgtgattt 480
 taaacttaaa gaagtggcta gaaataacat gggaaatgat acaaacctcg ag 532

<210> 1482
 <211> 585
 <212> DNA
 <213> Homo sapiens

<400> 1482
 gaattcggcc aaagaggcct agatcagtag cattaacaaa agttgcttta aaagccatta 60
 tgtaaaacaa gacttgaaaa tgagtggagg aatttttagc acactgtctg agcagcagtg 120
 ggaaccatct tcgtttcccc tttgaactcc cagtgggatg ccctaccctg cgccttagg 180
 acccggaact accgtgtaca aaactttacg tgccaaaatt ctgagtgaat ttagctttct 240
 cctctttttt gatgctgtaa tttttgttca tcatgttttg ctgtgatgtt acataggtag 300
 atttgtatgt agttttaatg tcacctataa caaaatgtgt ttggtagcag attgtccaga 360
 aagcatttta aatgaagagg tataaacctt taagggccaa aattctgtat attagattac 420
 tcttaaacga aaaaccagct gccgttttta tgtacacata ttacatacga gtaggcagca 480
 gactttaaaa ataaaaaaa cctaggcatg ttgatgttgc aaaatgctgt ataaagctga 540
 aacctgttca ttcagtgcga ttgtagtga catgaagctc tcgag 585

<210> 1483
 <211> 418

<212> DNA

<213> Homo sapiens

<400> 1483

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gaattcggcc aaagaggcct aatttttttt gaggatttgt tttacttggg tgtcacattc 60
ataattttta atcctttaag gagaaaaatg tgcttattaa atttttggtc tctgaatgct 120
accaagtctt agtcatacag aacaatatgc tgcaactgtt tacaattcct aaaactgtaa 180
actcctcaag gacttggagg ctaaactatga agaataataa attaagttga caatcactgt 240
ctcctgcata acactgactt cacttctctt gagaaatgtg catctgctaa tccatattta 300
ttacttttta ggggtgggtg aaccataaaa taagatactg ttctttgaat gccttttagct 360
ggtgttattt accagtaatg cttggagaaa gaatccaaaa ttaccccccac tactcgag 418
```

<210> 1484

<211> 572

<212> DNA

<213> Homo sapiens

<400> 1484

```
gaattcggcc aaagaggcct aggccttcac tttttgaatg catctctgta ggctttgtga 60
tttagggag gatctgttaa actttcaagt tcagagaaaa gtttcttaaa ctccccaggg 120
attttctccc aggtctgcga cagtcgactg acagaagcag tgttgagacc catcacaatg 180
gcaaagaaa aattcaggtt tctctgggct ttgcagttag ccgcaatttt gatgaatttt 240
ttcaccagct gcactcgctt gcccagctgg ctgcagagca gaatctccgt gcccacccaa 300
agctggacct cattgcatct ctggagcaga aggcctgagat ttgcagtgtg tccccactt 360
cctgtctgc tgaacgtgaa gtagatcagc tcttgctcgt gaattgaatt gaatagactc 420
caatcaaaa tcattaatc cagagcaaga tcccaagtgt tcattcccaa aatcctcacc 480
gacctttgct gtgattcctc attttctgca aatgggttca aagtgtccgc caggctcttc 540
cggtagacat atattcgacc agatgcctcg ag 572
```

<210> 1485

<211> 451

<212> DNA

<213> Homo sapiens

<400> 1485

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gaattcggcc aaagaggcct acttcttccg ggcccacgga aaaggcgggc gtagtgctct 60
tgaccgctc cccaggggcc cccatggagc ccttctgccc ttgggtcca gtgtggcccc 120
tgccccctgc tgagcctgtt ttgccatatt tcccttgag gcctcgatct ccgcggtcac 180
ccttctcccc ttccaagata gtgatgttga tctggggcac ggcggtcgcc gggtagatgg 240
aggtaccagg gtcacagcag cgcaagcacc gggaagcagg gageccctgg tcttgactgg 300
gcctgtattt ttcatgttgt tcttcagccc tctcggcatt gtccggaggg gacggcagct 360
cctcagtcce ctcccactcc tgctgttccc cctggacatg gggcacgcga ctcaggacca 420
ggccagaggg aaaggcaagg agcaggtcga g 451
```

<210> 1486

<211> 590

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (69)

<400> 1486

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gaattcggcc aaagaggcct aagcaaatgc aaaaactctt tgagagggta ggagggtggg 60
aaggaaacna ccatgtcatt tcagaagtta gtttgtatat attataataa tcttataatt 120
gttctcagaa tcccttaaca gttgtattta acagaaattg tatattgtaa tttaaaataa 180
ttatataact gtatttgaaa taagaattca gacatctgag gttttatttc atttttcaat 240
agcacatatg gaattttgca aagatttaat ctgccaaggg ccgactaaga gacgttgtaa 300
agtatgtatt attcacattt aatagactta cagggataag gcctgtgggg ggtaatccct 360
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gctttttgtg ttttttttgt ttgtttgttt gtttgttttt ggggggtttt cttgccttgg 420
ttgtctggca aggactttgt acatttgga gtttttatga gaaacttaaa tgttatctgg 480
gcttatatct ggcctctgct ttctccttta attgtaaagt aaaagctata aagcagtatt 540
ttctctgaca aatggcatat gttttccact tctttgcatg cgtcctcgag 590

<210> 1487

<211> 596

<212> DNA

<213> Homo sapiens

<400> 1487

gaattcggcc aaagaggcct acttttgtct gcctcattct aaaatttaca cagtagacca 60
tttgtcatcc atgctgtccc acaaatagtt ttttgtttac gatttatgac aggtttatgt 120
tacttctatt tgaatttcta tatttcccat gtggttttta tgtttaatat taggggagta 180
gagccagtta acatttaggg agttatctgt tttcatcttg aggtggccaa tatggggatg 240
tggaattttt atacaagtta taagtgtttg gcatagtact tttggtacat tgtggcttca 300
aaaggggcag tgtaaaactg cttccatgtc taagcaaaga aaactgccta catactggtt 360
tgtctctggc ggggaataaaa gggatcattg gttccagtca cagggtgtagt aattgtgggt 420
actttaagggt ttggagcact tacaaggctg tggtagaatc ataccccatg gataccacat 480
attaaacat gtatatctgt ggaatactca atgtgtacac ctttgactac agctgcagaa 540
gtgttccttt agacaaagtt gtgaccatt ttactctgga taagggtttt ctcgag 596

<210> 1488

<211> 503

<212> DNA

<213> Homo sapiens

<400> 1488

gaattcggcc aaagaggcct aagcctttct ttctgcagct aagggcagag gctgtgccta 60
gggtatatacc accactagca tctgtatttg agactgttct cttagatggg taagaggtgg 120
aaaacaaact tagtatcag ggtccatgaa gcccatggca tcatttttga aaatatttct 180
agtttttagt ccaaagcaat tggttttagt aaaatgagac ttcttcagga gtcactcctt 240
tactgtggac ccattgttca gtgggaatgg aagtatatgt atctatcttg tgtattaact 300
tctgacttat ttatacaaga gcagctatag gagtttaca aagaacttta agttattaag 360
ttactataaa tttggggatc ctagagtgat cttaaatatg gcaagataca gctcatttag 420
aataaaaatc cacatccatt attttaaagg gaatgattgg ggggaaaaac tggggaagaa 480
gaaatataaa aaggaccctc gag 503

<210> 1489

<211> 270

<212> DNA

<213> Homo sapiens

<400> 1489

gaattcggcc ttcatggcct acaaccccaa atattaagcc aagattaaaa aaccaaacag 60
ataagaatgg catattttta tctaaatgac ttaattttgt tctcttcttt aatgttatgc 120
tgtgggcaca attcaagcaa cttgacagct attttctctc agcataatga agaccttggt 180
ctactcactg ctcaactcca gtgctgctgc tgggaaattg gtagtcgttt atatcactct 240
gtcctttctta cagtcttagt tccactcgag 270

<210> 1490

<211> 352

<212> DNA

<213> Homo sapiens

<400> 1490

gaattcggcc aaagaggcct acgcctcccc tccgcaccca cccccctgcy cccaggcttc 60
tcccggacac cgcagcctcc tgccgaagaa cccccgcacc ctcttaccta cagccagctt 120
cttcgggtgg gcctcagccc agacagccca gcaggtgaca ggaatagtgt gggcagtgag 180
ggcagcgtgg gcagcatccg cagtgcgggc agcgggcaga gctctgaggg cactaatggc 240

catggccctg gcctcctgat tgagaacgcc cagccactgc cctctgctgg agaggaccag 300
gtgctgccag gactccaccc gccgtccctg gcagacaacc cctccactcg ag 352

<210> 1491
<211> 287
<212> DNA
<213> Homo sapiens

<400> 1491
gaattcggcc aaagaggcct agaagctctc tgtttggaag tggagacaaa gaccaaatat 60
agattcttat tgttgcaact ctataattcc ctcaccctta ttttcaccag gcaaaatttc 120
ttcgtttttt ttatagetca gttcagattt cactttattt gtgaaacctt ctcactctgc 180
cgctagttaa aagaggcctt tcttccatc tcatggtttt gtctattgta aagtactatt 240
attattgggt tatgtatctt tcttcaaccc actgtgattg tctcgag 287

<210> 1492
<211> 275
<212> DNA
<213> Homo sapiens

<400> 1492
gaattcgcgg ccgcgtcgac tccctactcc ccacccccga ccccccattca gaaagaagca 60
ctgttgacac ttcaatgcat attctgaact ccagggtcctt tctttgcata catcaagctc 120
tcactctctt gccggctctg tggctctgcaa acccagagag cagatgcttt gctcagcgct 180
cgtaccacgc cagcaccaca catgctctct ttgtacctgg gtttcaaccc acaggtcggg 240
ccctgtgaag cccttggtc cccaagcttc tcgag 275

<210> 1493
<211> 393
<212> DNA
<213> Homo sapiens

<400> 1493
gaattcgcgg ccgcgtcgac agctgatcca agttttatgc tgatttttcc aaagatctct 60
ccctcctttt ccctccataa ctcacaggta gggaaagggg cgccattagg atggtgttac 120
tgtattggga ttttatgttg ttctgtctgc ttcagcacag gtagtataag gttatattac 180
tgtagaacca cagtgcccat cttgccagca gtgcccgcgc ccacctcaa agctgagcag 240
gttgagcctt tgctagtctg gggccagacc cctcagatgg ggatatccct gggggagccc 300
ggtgctgaac cagaagaggc ttcctggtgc ttctgtccta ggccaccact cctccagccc 360
tttgcccgcata catatgcc ccacaaactc gag 393

<210> 1494
<211> 269
<212> DNA
<213> Homo sapiens

<400> 1494
gaattcgcgg ccgcgtcgac aagatacaat aaaacatact taactgtttt aaaaagtgtg 60
tcataggagc ttttgaacat acaaatacaa tcatacttca atttcagttt atactgaaca 120
aaatacagtt tttctttgaa ttggtagtac ttcagaatct gagtgtctta acagtcattg 180
tgttagtaaa tttgagtgc tctgtatgc tgggtattca agatgctaag gatccatcca 240
gctttgaaca agacaaggcc cagctcgag 269

<210> 1495
<211> 309
<212> DNA
<213> Homo sapiens

<400> 1495
gaattcgcgg ccgcgtcgac gagcacttaa cttcaggtca gttgctgagg aagaggtctg 60

aaggtaatat tagtaccccc ccaactactt tcagctggaa acaagagttg ttggggccct 120
 tactgagttc ctacttttaga gtcaagggct ggccttcccc tgcattctgc tgcattgtacc 180
 tcacaggtga gcagataaca tatttgtgca gctattccct tatgatttcc tctctattag 240
 agagaggtgg gagcctatga cagactgcag agtggttgcct ccattcttcc ccacccata 300
 gctctcgag 309

<210> 1496

<211> 314

<212> DNA

<213> Homo sapiens

<400> 1496

gaattcgcgg ccgcgtcgac agccatagaa gaaacttgag tatgcctggc caccttcttg 60
 gatctgctgt cttaaattata tatatatttt actgcaggaa agtatacttc gtaaggagta 120
 gttttttattt attgttttat ttggttctca gtggaaccct gtcaaattcc ataaaagcgg 180
 aaaaaaacaa aactcattag agtggttttaa attgaatggt tgccttttac atatatattgc 240
 tcttcagcat ggttcctaat ttgaatgtta catgttttaga aaaattttca gccagggtgcg 300
 gtggctcact cgag 314

<210> 1497

<211> 303

<212> DNA

<213> Homo sapiens

<400> 1497

gaattcgcgg ccgcgtcgac cctaaaccgt cgattgaatt ctagacctgc agcctgggtg 60
 gcagagcaag tctccatctc acaaaaacaa gcaaacaaac aaaaaataaa caaaatcaaa 120
 aacaggaaca tgaaaactgc ttttgttctc ttgtgtaata gatttacttt attttttttt 180
 ctgtttcttc ttcatttttc ttttttctt tctttatcct ttttttgggg gggggcagaa 240
 tctcactcag tcacccactg ccctgcagcc tgggtggcag agcaagtctc catctcactc 300
 gag 303

<210> 1498

<211> 380

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (21) .. (23)

<400> 1498

gaattcgcgg ccgcgtcgac nnnagtgtgg gggtttttcc ccccaccagg aagtggcagc 60
 atccctcctt ctcccctaaa gggactctgc ggaacctttc acacctcttt ctcagggacg 120
 gggcaggtgt gtgtgtggta cactgacgtg tccagaagca gcactttgac tgctctggag 180
 taggggttga caatttcaag gaatgtttgg atttctgca tcttgtggat tactccttag 240
 ataccgcata gattgcaata taatgctgca tgttcaagat gaacagtagc tcctagtaat 300
 cataaaatcc actccttgca cagtttgatc tttactgaaa tatgttgcca aaatttat 360
 ttgtgtgtgt agctctcgag 380

<210> 1499

<211> 498

<212> DNA

<213> Homo sapiens

<400> 1499

gaattcgcgg ccgcgtcgac cctttctagc cttagacaaa tgatcaccat gttagcctta 60
 gacgaagaag ctggctagtc cttctgtgta agctaataca atggctcatt ccagacaaat 120
 ttaaaggaaa cactaaggct gcttcaaaga ttatctgatt cctttaaaat atatgtctat 180
 atacacagac atgtcttttt ttttaagtgt tacattttta tagagatgaa tcagtttttg 240

aatctaagct gtttgccaag ctgaagctac aggttggtgaa ataattttta acttttggaa 300
 tcatactgcc tactgttact ctaaaatagaa atatagggtt ttttttaatg tgaatttttg 360
 cctatcttta aacatttcaa tgtcagcctt tgtaacctt aaatacactg aattgaatct 420
 acaaaagtga accatctcag acctttactg atactacaac ttttgtttc tgatggccaa 480
 aatacctaata acctcgag 498

<210> 1500

<211> 334

<212> DNA

<213> Homo sapiens

<400> 1500

gaattcgcgg ccgcgtcgac tgaagaagtg aaaatgacaa taatgactct caagaggctg 60
 gcgatgtgac atggcaaagt tagaactgac ttaaattgaa caaacctca ctgagcacct 120
 ctgatgttga gcacctgctg aatactgagc actgaatggg ggagggggag gggagcacgg 180
 ggtgagtcaa cctgggactc ggtctcaggg atatgcctac caatagcggg tatcgtaagg 240
 catgtaccca aacataacgg atgtaaggca gaaagtgatc ggagaaggaa tgagaaagtg 300
 tgcgtgatgt taatgaaaag tctaacagct cgag 334

<210> 1501

<211> 220

<212> DNA

<213> Homo sapiens

<400> 1501

gaattcgcgg ccgcgtcgac aattctagcc ctctcagcaa ctttaattata aaacaattac 60
 ttctaatttc tcacttagtg ttggggaatt ttgcttgga ttttctaggg aaagaggaaa 120
 agcagaggta gtggtagctt tgaaaatgtg gaaccttatg ctattatgta taacttcact 180
 tcaatatggc ttacagaag acacagtcac ccaactcgag 220

<210> 1502

<211> 165

<212> DNA

<213> Homo sapiens

<400> 1502

gaattcgcgg ccgcgtcgac gggcaggtat tgaactctta agtacaaaat tattttccca 60
 aagaatttta aaatatacta tcccactatc tttttgcac cagcattagt aattatagga 120
 ttattgctgg ttgtactctt ttctgtctat cctcagtgtc tcgag 165

<210> 1503

<211> 614

<212> DNA

<213> Homo sapiens

<400> 1503

gaattcgcgg ccgcgtcgat gtacatatatc ataagcatgc acacagacag acataaaaaat 60
 gataggatca tataagacat tgtatagact gttttatgat agggtaatac acttttcttt 120
 tctttttctt ctttgtccag ctcttctgtt ctttatccat atcatactct atccctactc 180
 aaggaaacct agcaacatgt ttatagtctc atatgtctca ttatgtctat atgtcattta 240
 catggtatct tatatacagg gtttacacat ttatagttaa cgatctttat atagtattata 300
 caatatctgt ttttcttttc tctgcaatac aaacgtgttt catatccctc aaacacaccc 360
 acacccctca cttacacatg tgttactact gtttgctttt gtaaacttgt gttcaacgta 420
 tacacattaa tcatttaagc atacctgtg gaaatcctgc caacttgact actgtgcttc 480
 caatttcttc ctttttatcc catcataata aacctggcaa taattgatcc aaccatagtc 540
 acattgatat cacttatgct gtttgtttat ttttactact acaaacatgc tacaacaaag 600
 ttccgggact cgag 614

<210> 1504

<211> 329

<212> DNA

<213> Homo sapiens

<400> 1504

```

gaattcgcgg ccgcgctcgac aggtaagtca tttaatttca cttttcaggt ttgttttggg 60
atttgtctgg gggcagattg ttaaggcctg ttttagaatc agctaccctt gcattgtaaa 120
tggggcttct aagagcacca gatcgtggtc tcttggctcc cggcaaggca gagctgatga 180
gagaagggtcc ttgcccgcag cactgcaggc aggatgggat agtttgggtg tttcttctg 240
tgtgtgtttc tctgtgctgg gtgagggaga cagctgggag ttggccttta tccagtgcc 300
gagagagctg tggagggat gagctcgag                                     329

```

<210> 1505

<211> 306

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (23)

<400> 1505

```

gaattcgcgg ccgcgctcgac agngaaatct gcctcctcca tgtctcaagc cacgtggaat 60
aaattgtgga aagacctgtg ctgtctggct tgtgccttta cacatgctgt tatctctacc 120
tcaaagtctg tcttccccca ctggctaacc cttgttatcc ttataacag ctcagaagtt 180
gcctgctcaa agacacttct ttggcctgaa ttagaactgc cctctcacgt gctacttcca 240
tcacagatct taccatctat tatattatta catcacaca cacacacaca cacacacaca 300
ctcgag                                     306

```

<210> 1506

<211> 353

<212> DNA

<213> Homo sapiens

<400> 1506

```

gaattcgcgg ccgcgctcgac ctttttttca cacagtgat agaaatcctt ctaactcctt 60
gattctttca ctttatctta ctggtctcta catgtcagaa cacagaagtt gtgttttgtt 120
tcgttttgtt ttacagagct gtggttaagta ttggatgggc cattgtttgg atgttttcga 180
tgttctgtcc ttctcttagat ctattcgggg gcatttgggt tgtctccaat ttgttggtac 240
ttcaaacaat ggtatactca atacagtgtg ttagggtagg gattttttaca gaagaaacta 300
aacagccgtt agaaaattat ttttttacat taactcaacc agttattctc gag          353

```

<210> 1507

<211> 331

<212> DNA

<213> Homo sapiens

<400> 1507

```

gaattcgcgg ccgcgctcgac ggaaaatgaa gctcttaaag atatgctgta aaacagccac 60
agagtttcaca acaccttata tcataggtgt tcatgactcc taaaagtctg taagcccaag 120
aagacaagac catatctttt tcttagttaa tcatgatgga agtattgtgc agatttttaa 180
actagcttta ttgtggttta attgacatac aataagttgt atatatattga agtatatagc 240
ttgataagtt ttgatattgt tataccaata aactcatgac gacaatcaga taatgaacat 300
atccaagacc ctcgagtaaa gttgactcga g                                     331

```

<210> 1508

<211> 229

<212> DNA

<213> Homo sapiens

<400> 1508

```

gaattcgagg ccgcgtcgac gaggtccccc ttttttctaa atttctctgt gtgcttttct 60
ccccctgcta ctttttccat ccgttctctt tcaactcttg tctctttgca agtccctaaa 120
gtatcatcca ttttgccgtg tatttatggg tctccctcat tcttttctcc tcagttttct 180
ctttttcttg ctgtcttggg gagcttctgc atgtgaccca attctcgag 229

```

<210> 1509

<211> 551

<212> DNA

<213> Homo sapiens

<400> 1509

```

gaattcgagg ccgcgtcgac ccaacagatg agtctttttg gtactagata ggaagagtg 60
aatgtcctgt gttgatatag aattgtttta gttatctgtc cctgtcttaa tttctctgca 120
tatttagtgt aattatcttc ttgatctatg ttgtcttagg atgcaagggg gaatttgagc 180
atccttctct caatctttcc ctccatcag agtctcagaa tccactcttc tatttccatt 240
tgactaaatc ataggcatct aagagggagc caccctcgcc cctactaac tagcagaata 300
agactgacca gtttccaact aatcaattac ttgagttacc atgtccggca gatttctact 360
ttgtctgtat tctcaactct gttgcttctg tcatctccag caccactctg ccagtcagg 420
ctttgatccg cacatagctg gactaactgc tcatctacct aatgtggctc attctccata 480
gcactatcag attaatcttc ctaatgtggc acttgacccc tactactttc tgcttaaagc 540
acaacctcga g 551

```

<210> 1510

<211> 273

<212> DNA

<213> Homo sapiens

<400> 1510

```

gaattcgagg ccgcgtcgac gcttttttaa aaaatttcag aactgtgtac tgtgatgaaa 60
ctgctgacga atcctcagga attaatgtgc atcaaccac tgcttttgct cacaagtac 120
ttcagctctc tggagtgtct ctcttctggg atgagtttct tgcacagcc aaatcttccc 180
cagtgtgttc aactgcacca gtggaaactg agccaaagct ctcacctagc tggaacccca 240
aaattattta tgagccacac cccacagctc gag 273

```

<210> 1511

<211> 291

<212> DNA

<213> Homo sapiens

<400> 1511

```

gaattcgagg ccgcgtcgac aattatcata ttttccataa agagagcatt gatttcatcc 60
attggcatat tgagatgctt tctgtttga cattggtcac agaatttaaa aggaaaaaca 120
acattactgc acattcagga atcagaaata gaagtaaagg tcaggatctt aaagggaaac 180
ttgacaggat atcaggcctg cctttaaaaa aattcagaca tgataagttt actaccaatc 240
attttttcaa taacaacaat aatatattta tattttccca tggaactcga g 291

```

<210> 1512

<211> 229

<212> DNA

<213> Homo sapiens

<400> 1512

```

gaattcgagg ccgcgtcgac ccggtttcag cgaagtcgca cgtgaaggat agcagtggcc 60
tgagaaagac ccagtcattg cagcctccag catcagttca ccatggggaa agcatgtgtt 120
caaagccatt ctgatggctc tagtggccct tatctctctc cactcagcat tggcccagtc 180
ccgtcgagac tttgaccac caggccaaca gaagagagaa accctcgag 229

```

<210> 1513

<211> 104

<212> DNA

<213> Homo sapiens

<400> 1513

gaattcgcg cgcgctcgac cgcaccga aaatctgttc tgacatgaga atgttcacaa 60
aagacagcac ttctcgactt ctgctgataa gcttgggtct cgag 104

<210> 1514

<211> 357

<212> DNA

<213> Homo sapiens

<400> 1514

gaattcgcg cgcgctcgac aaatcttatt gttgttttaa aaacctgtgt tttttatatg 60
aggtttaaaa aatccatatt ttccattact cctcttctag gttctgagtc ttctggtagt 120
gtagggtcat ctacaggctc tctttctcac atccagcagc ctcttccagg tacagctctc 180
agccagtctt ctcatggcgc acctgtcgtc tatecaactg tcagcactca tagttctctt 240
tcctttgatg gtggcctaaa tgggcaagtc gcactctcta gcactagctt ctttttgctt 300
cccttggaag cggcaggcat accacctggc agtattctga tcaaccact tctcgag 357

<210> 1515

<211> 237

<212> DNA

<213> Homo sapiens

<400> 1515

gaattcgcg cgcgctcgac ggtatttgct tactgtatta acttcgacca tcccaataga 60
aacgtgccaa taaatcattg atgatcttta attgctgcct gtacgggtga ataataccaa 120
tatcagaggg actgcacca gccttaacaa aaatggaggt taggaaaact atgagtttgg 180
cttctgttac attgctcacc accacctttt tcaacttggt ctggcgtgg actcgag 237

<210> 1516

<211> 543

<212> DNA

<213> Homo sapiens

<400> 1516

gaattcgcg cgcgctcgac cgaggacaga agatagaaac aagagtttga ggtttggctt 60
tgattagaaa cttgggtggc tcaaaagaaa cttaccagaa gcacagtagc tgtaggtttg 120
gggtcccaaa agggtagcct gagcttttta gggctaaaac tgggaaagaa acacctaaac 180
tgtgtcttaa actaaattta tgactgagtt tctgccatgt ggtgatttat agtatgtgct 240
ttcagattcg cctacttta atcatgaaag cttcattcta tagaccacca cctgtgtgat 300
gtccttgctt tcaaagacga tttaaacttg gactgttttt cccagtaaaa gagatttgct 360
ttcagaatgt cgagtgtatt cataacggat ggttcttcat tacttacaaa tttttgtaat 420
taatcttctg atgaaacaaa aagctatgat gttgctgtta atgtgtattt gatagatatt 480
ggttgacaaa tgcaggctaa atgggatgtg gcaatacttt ggggccagat atagaggctc 540
gag 543

<210> 1517

<211> 431

<212> DNA

<213> Homo sapiens

<400> 1517

gaattcgcg cgcgctcgac caactgcatg gctccatttt ttcaggccat ccatcaacca 60
tggggtcctg gattcctctt tctcttacat cccatgttct attcattagc aactcttgct 120
agtatagtct tgaaaataag ttggattatt tctaactacc tgttactgct cttgactttg 180
gacaatatgt tatcaaccag tgaccatttg aaagtataca aattatttga cttacttgag 240
caaaatcttc ccgtggcttc tctctcacc cggatccag cttgaagaat aaccactacc 300
tacatggccc tgcgctgctc ggctccggac gccatcttgg cctcagctcc caaagcact 360
tccctctca ccgtgtctca gctgcgctc gtgctctctc ttactctac gggatacccc 420

acccccctcga g

431

<210> 1518

<211> 361

<212> DNA

<213> Homo sapiens

<400> 1518

gaattcgcgg ccgcgtcgac gggagggtcaa agctgcagta agtcaagatt gcaacgctgc 60
actccagcct ggggtgacaga gtgagaccct gtctcgaaaa agaaacatac ataaggaata 120
tattgtctca gatattctaaa gaatccagga gtacacctgg tgttgccac tgggtgatgt 180
gggtgtggaaa caatctttct ccatctctta ggtctactgt tttctgtgtc tcctccattt 240
taagatagac ttttctaagt aaaagtttac tgtttccagt ggaaggaagt tgcctctttc 300
caaacagtac caataaaagt tccaaggctg actcatgggt ccaactatag cagtgcctga 360
g 361

<210> 1519

<211> 274

<212> DNA

<213> Homo sapiens

<400> 1519

gaattctgga gtcaaataca ccaagtcgga cttgcggtta atcgaagtca ctgagaccat 60
ttgcaagagg ctctctggatt atagcctgca caaggagagg accggcagca atcgatttgc 120
caagggcattg tcagagacct ttgagacatt acacaacctg gtacacaaaag gggteaaggt 180
gggtgatggac atcccctatg agctgtggaa cgagacttct gcagagggtg ctgacctcaa 240
gaagcagtgat gatgtgctgg cgacgagttc cgag 274

<210> 1520

<211> 687

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (21)

<400> 1520

gaattcgcgg ccgcgtcgac ntacgcatgg gcactctgag ttcataggaa gatagttaaa 60
aagaaaatga gtataggatt tgaactaaaa ataacatggg acttgaagat tgacttgcaa 120
agtcaggttc attattttga cagatgcatt tcaagtagag ttgccagaca aaatatagga 180
ttttgagtta gattagaatt tcagataaac agcaaataat tgttttaata taagtatgtc 240
cgccaaaactg tagatatact gaaagctatt gctgtttatt gaatcaaaa ttaattgggg 300
gtctgtaatt cagtttgcca aatctggctc cctagttcc acacaagtta atttcttgca 360
cattgtgata taggaggctg gataccatag atacggtaga gttgtacatt atccaggctg 420
cctgagtgcc aaaccagtat ccattcctaa ggtcttatga ttaggataaa agattttcta 480
cttcagcaca aagtgccttt tgaaaatttg tgatgattat ttctggaaat ctgtcccatc 540
ttagcattgc tagagttggg ttatcatgag acataactca agagaaatta gctatactga 600
gatcatttta tcaaagggtac tcgtgacata ggcaatttga tatgtcccaa gtctgcctcc 660
aatgtcaggt gagttcccaa actcgag 687

<210> 1521

<211> 132

<212> DNA

<213> Homo sapiens

<400> 1521

gaattcgcgg ccgcgtcgac gagattgtgc cctcttttcc attctctccc aatagatctc 60
atgtcttaaca ctactctaac tttgtctccc tctgagacca gcatgaactc cagttctttc 120
tggcctctcg ag 132

<210> 1522

<211> 324

<212> DNA

<213> Homo sapiens

<400> 1522

```

gaattcgcgg ccgcgtcgac gtgatcttca gttttcactt gcacctttga atattctgcc 60
atgtttgaaat tccttagaat gatcaagcat cttttttgtt gttgggggtt gggtttttgt 120
ttggttttgt tttgtttgag acagagtttt accctgtcac atgggctgga gtgcagtggc 180
atggtcatgg ctcactgcaa ccttgaccat ctgggctcta gtgatcctca gcctccccga 240
gtagctgaga tcacaagtgc taatttttga aaaattgttt gtagagacag ggtcttacta 300
tgttataagc ccaggcctct cgag

```

324

<210> 1523

<211> 373

<212> DNA

<213> Homo sapiens

<400> 1523

```

gaattcgcgg ccgaggcaag aagttcccggt gtatacagat tctgaaccca ggcaagaagt 60
tcccatgtgt tcagaccctg aaccaggga agaagttccc acatgtacag gccctgaatc 120
caggcaagaa gttcccatgt atacaggccc tgaatccagg caagaagttt taatacggac 180
agaccctgaa tctaggcaag aaattatgtg tacaggccat gaatccaaac aggaagttcc 240
catatgtaca gatcctatat ccaagcaaga agactccatg tgtacacacg ctgaaatcaa 300
tcaaaaatta cctgtagcaa cagattttga atttaagcta gaagctctca tgtgtacaaa 360
ccctgaactc gag

```

373

<210> 1524

<211> 242

<212> DNA

<213> Homo sapiens

<400> 1524

```

gaattcgcgg ccgcgtcgac tcgagattta ctggcaactg ttcttttccc atcaaaaatc 60
agtgaatggt tgctgagtat aaatgctgct tccttaaacc acttgctgct ttaggatcaa 120
ctttacctgt acctttttct ctttctctcc ttgccacctc aggtgcaaact ctgaactcag 180
tgtctgcttc ttccattttc tcgtctctct cccctcttcc cccatccccg gtttgctctg 240
ag

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242

<210> 1525

<211> 527

<212> DNA

<213> Homo sapiens

<400> 1525

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gaattcgcgg ccgcgtcgac cttgaattct aaaagccaga gctggaaata accgaaaagt 60
cttaagggaag tgtgtctgctg tggctgccaa taaaataaag ctaatgagtg atgtagaaga 120
gaattctagc tctgaaagtg tctgttctgg tcggaagctg cctcaccgca atgcttctgc 180
tgtagctaga aaaaagtatt tacataatc tggaagatga acagagctta aagtcagaaa 240
ttgaagaaga ggagctaaaa gatgaaaatc aaccattacc agtgtccagt tctcacactg 300
cccagagcaa tgttgatgaa tctgaaaaca gagactcaga gtcagaaagt gatttgcggt 360
tagcccgga aaattggcat gctaatggtt acaagtccca tactccagca ccttcaaaga 420
caaaatttct taaaatagag tcttctgagg aagactctaa aagtcatgat tcagatcatg 480
catgtaacag aactgctggc ccatcaacgt ctgtgcagag cctcgag

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527

<210> 1526

<211> 388

<212> DNA

<213> Homo sapiens

<400> 1526
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 taccaacatt agctgcagtg acagcctgtc atatgccagt gaagatgccc tcaagacagt 180
 gcaggccttc atgattctct ctatcatctt ctgtgtcatt gccctccttg tcttcgtgtt 240
 ccagctcttc accatggaga agggaaaccg gttcttcttc tcaggggcca ccacactggt 300
 gtgctggctg tgcatctctg tgggggtgtc catctacact agtcattatg cgaatcgtga 360
 tggaaacgcag tatcaccacc tgctcgag 388

<210> 1527
 <211> 161
 <212> DNA
 <213> Homo sapiens

<400> 1527
 gaattcgcgg ccgcgtcgac gagctagggt acgggtgcag gcaggaaaca gaaacaacac 60
 agctacacat tcttgagata actctggtct ttatactgaa actaaccaac taagaaaatt 120
 attcaatgca ttatacatcc ttaatcccca caacactcga g 161

<210> 1528
 <211> 294
 <212> DNA
 <213> Homo sapiens

<400> 1528
 gaattcgcgg ccgcgtcgac atcctaagca catacgcata tttaaactgg caccaagctg 60
 ttaattatgt taatgccttt atggcacaaa aatgtaaaat ttactattaa ctggggggt 120
 gacctaaaga gctggcaaat ctccctatc ctccctatc tggctatctt gctgggcttg 180
 caatgccagg gcctacttag aatagccaca gccacacatg agcatcatgg gagacttctg 240
 ggggcaactt cagcttcttc ctctaaaatg attcccgact ccagatcct cgag 294

<210> 1529
 <211> 452
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (424) .. (427)

<400> 1529
 gaattcgcgg ccgcgtcgac agatgtcaga ggatttagca aagcagctgg caagctacaa 60
 agctcagctc cagcaagttg aagctgcatt atctggaaat ggagaaaatg aagatttgct 120
 aaaattgaag aaagatttac aagaagttat agaactaacc aaagaccttc tgtcaactca 180
 accttctgag acgettgcga gtccagacag ttttgcttct actcaaccta ctcattcatg 240
 gaaagtagga gacaagtgtg tggcagtcgt gagtgaagat ggacagtgtt atgaagcgga 300
 gattgaggag atagatgaag aaaatggcac cgctgcaatc acctttgctg gttatggcaa 360
 tgctgaagtg actccactgt tgaacctcaa gcctgtagaa gaaggaagga agggcaaagga 420
 ggannnttg caacaaaccc atgaacctcg ag 452

<210> 1530
 <211> 369
 <212> DNA
 <213> Homo sapiens

<400> 1530
 gaattcgcgg ccgcgtcgac ctgaagtaac caacaactag gtctttgtta gctaagcagt 60
 gtataagtta ttaacaaaac tcaaaaacag ttaactgtgg ttggaaatat tcattctaaa 120
 aatcaattta tgaaaataaa aaactcacca aaaaaatcat caagtaagta gaggagacat 180
 aattggctga aaataaacta ggagagaaaa aaccctctaa accccctaa aactccaaat 240

cctctttttt tgattgttca tttttattgc tttgtttatt ctttcattggt tcaaattcct 300
 ttagtatttt ttttaattgc aaaagcaatg agtgaggctt tcgggaaaag cagaaacgtt 360
 gggctcgag 369

<210> 1531

<211> 211

<212> DNA

<213> Homo sapiens

<400> 1531

gaattcgcg cgcgctcgac ctcgagagtt tcctttgaga acattatact attggctcta 60
 gtctccaaac caataaaaaa ctaaaacttg tttccaagac tgggaggtaa agtaggctta 120
 taaaacaata cagcaaaaga aagccaagtg gcttaattgt ttccagtgtg cttgccatct 180
 tagcatgggt actttccaga tgctactcga g 211

<210> 1532

<211> 211

<212> DNA

<213> Homo sapiens

<400> 1532

gaattcgcg cgcgctcgac gtcgattgaa ttctagacct gccacatcaa tctcacgggt 60
 gattacaaga tttccagaag ccttgaacaa ttcaatttca accatgcctc tagaacatcc 120
 tctcttcaca aaaaacccaa ctttatctgc tcgtcccatg aaagcaggtt ttccagctaa 180
 accaaggcaa atggcacaca caaaactcga g 211

<210> 1533

<211> 447

<212> DNA

<213> Homo sapiens

<400> 1533

gaattcgcg cgcgctcgac caaggagact aagatgcaga aaccccaactt acctttatct 60
 caggaaaagt ctgcaattaa aaaagctagc aaccttcaga aaaataaac cgctagctcc 120
 acgacaaagg agaaggagac aaaactacct ttactttccc gtgttccaag tgctgggtcc 180
 tctctagtac cattaatgc taaaaattgt gctcttcag tttctaaaaa agataaagag 240
 cgctcctcat ctaaagaatg ttctgggcat tctacagaat ccaccaaca caaggaacac 300
 aaagcaaaga ctaataaggc cgattctaag gtatcttcag ggaaaatttc tgggggacct 360
 ttgcgctcag aatatggcac tcctacaaag tctccccctg ctgctttgga agttgtgcca 420
 tgtatcccaa gccatgcagc actcgag 447

<210> 1534

<211> 150

<212> DNA

<213> Homo sapiens

<400> 1534

gaattcgcg cgcgctcgac gtgggaaagg agggaaagaa ggaagatttt ctgatgaagc 60
 catgcctgag aggtaatgac aactaggagt tagtcagatt agtgcttggg tgaggcctaa 120
 gaaggcactt atgaagctga gaagctcgag 150

<210> 1535

<211> 253

<212> DNA

<213> Homo sapiens

<400> 1535

gaattcgcg cgcgctcgac ctttagagac caatttgcct gaattttaaa atcttcctac 60
 acacatctag actttcaagt ttgcaaatca gtttttagca agaaaacatt ttgctatac 120
 aaacattttg ctaagtctgc ccaaagcccc cccaatgcat tccttcaaca aaatacaatc 180

tctgtacttt aaagttatct tagtcatgaa attttatatg cagagagaaa aagttaccga 240
gacagaactc gag 253

<210> 1536

<211> 273

<212> DNA

<213> Homo sapiens

<400> 1536

gaattcgcgg ccgcgtcgac gcaacatggc gtccaggtct aagcggcgtg ccgtggaaag 60
tggggttccg cagccgcgg atccccagt ccagcgcgac gaggaagagg aaaaagaagt 120
cgaaaaatgag gatgaagacg atgatgacag tgacaaggaa aaggatgaag aggacgaggt 180
cattgacgag gaagtgaata ttgaatttga agcttatctc ctatcagata atgattatga 240
cggaattaag aaattactgc agcagccctc gag 273

<210> 1537

<211> 347

<212> DNA

<213> Homo sapiens

<400> 1537

gaattcgcgg ccgcgtcgac cctaaaccag cgaacaccag tgcactcacc attcgctctc 60
caactactgt cctctttact agtagtccca tcaaaactgc tgttgtaccc gcttcacaca 120
tgagttctct aaatgtggtg aaaatgacaa caatatccct cacaccagc aacagtaaca 180
cccctcttaa acattctgcc tcagtcagca gtgctacagg aacaacagaa gaatcaagga 240
gtgttccaca gatcaagaat ggttctgtcg tgcgcttca gtctcctggg tccaggagca 300
gcagtgcggg gggaacatct gctgtggaag tcaaagtga tctcgag 347

<210> 1538

<211> 287

<212> DNA

<213> Homo sapiens

<400> 1538

gaattcgcgg ccgcgtcgac ctggctgatg gagcacgaag acgaccccg tgtggacgag 60
ccttttagaga ctccccttgg acatatcttg ggacgggagc ccacttctc agagcaaggc 120
ggccttgaag gatctggttc tgetgccgga gaagcaaacc cgctttgagt gaagaggaaa 180
gacaggaaca aactaagagg atgttgagc tgggtggcca gaagcagcgg gagcgtgaag 240
aaagagaggt acgggaggca ttggaacgtg aacagcaaca tctcgag 287

<210> 1539

<211> 298

<212> DNA

<213> Homo sapiens

<400> 1539

gaattcgcgg ccgcgtcgac cgttgaaatc agcattcaga gcaacttcca gccaggaatg 60
aaattggaag tggctaataa gaacaaccgc gacacgtact ggggtggccac gatcattacc 120
acgtgcgggc agctgctgct tctgcgtac tgcggttacg gggaggaccg cagggccgac 180
ttctggtgtg acgtagtcac cgcggatttg caccctgtg ggtggtgcac acagaacaac 240
aagggtgtga tgccgccgga cgcaatcaaa gagaagtaca cagactggac aactcgag 298

<210> 1540

<211> 425

<212> DNA

<213> Homo sapiens

<400> 1540

gaattcgcgg ccgcgtcgac ggagagagca cttgcagggg aactcccatt tataaaacca 60
tcagatctca tgagacttat tcaataccat gagaacagca tgggggaact gcctccatga 120

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ttcaattatc tccacctggc cccacccttg acacatggga attgtaacaa ttcaagatga 180
gatttgggtg gggacagagc caaaccatat aattcttccc tggccctccc aaatctcaag 240
tcctcacatt tcaaaagcaa tcatgccttc cccaaagtcc cccaaactct tatttcagca 300
ttaactcaaa attccatagt ccaaagtctc atctgagaca aggcaagtec cttccaccta 360
tgagcctgta aaatcaaaag caagtgagtt attttctaga tacacaggga tacaagcatc 420
tcgag 425

```

<210> 1541

<211> 347

<212> DNA

<213> Homo sapiens

<400> 1541

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gaattcgcgg ccgcgtcgac ttatacttct gctacctgtg gtctttgtct ctttaccctg 60
aagacctctt tgcttggtcc acttaggtcc tgccctccaa ctctcctgcc ggtgtcagcg 120
gtgaccttta ttcattgggtc cagtggacaa cctaattgtg tctttctgca ttctacaact 180
tcatttggca gtgttgactt ttcccactc tttgaaacac tcaactgtgg ttctcttgge 240
aggatgttct tctttccctc cccccacccc ttttctttgc cctttccttc actgtctgtt 300
tcgttttttt tcttctaccc agcactgaaa cctgggtgtt cctcgag 347

```

<210> 1542

<211> 282

<212> DNA

<213> Homo sapiens

<400> 1542

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gaattcgcgg ccgcgtcgac cggaagaaaag tgcattggtg cagcttgctt gaaaataaca 60
ttgctttgct tgtttacta ctctacatta ggggagaatt tcgatcgcca ggccagcctt 120
cgcggtctc taatttacac agacactctg gtaagacgac cgaagaaagt caaaaggaga 180
aagactatta caggagtccc tgacaacata cagaaggagc tagcatcagg cactggccaa 240
gatgatgctg atggccactc agtgtacacc cctgatctcg ag 282

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<210> 1543

<211> 292

<212> DNA

<213> Homo sapiens

<400> 1543

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gaattcgcgg ccgcgtcgac agcgttccct ttgctgctc caccaccgct actgttctct 60
ttccaaggag aacatcagtc ccattggatt gttttcttca ctagtgtatt cccagggctt 120
ggagcacaga aggcacccaa taaaagtcat ctgaatgagc caattccttc tccattttc 180
catgtggcta tttaaagcaa ctgtctactt tctcccac ttcaacctec cccacctctc 240
agatgcctcc tacctcagag gagaaaataa atgctactct cttcaactcg ag 292

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<210> 1544

<211> 218

<212> DNA

<213> Homo sapiens

<400> 1544

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gaattcgcgg ccgcgtcgac gtcaggggaa ctaaaaaaga aaaaaacagt cttgcttgca 60
gcaggtgtct catgcactac tttcttcaat ccttttgtgc catagtggga atctggacct 120
ttgagtgttg cacatgctgt gtagcacaca ttgggcagga tctctatggg ttctttgaac 180
atgacctga atgtgttagc tgtcccatca cactcgag 218

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<210> 1545

<211> 452

<212> DNA

<213> Homo sapiens

<400> 1545
 gaattcgcgg ccgcgtcgac actgaggagg tttgaggcgc gcgctctggg caggaagcct 60
 cccagccttt ctgaggatga tatctggcta aaaagcgagg gagacaacta tagtgccacc 120
 ctccctggagc ctgctgccag ctctctttcc ccagatcaca aaaacatgga aattgagggtg 180
 tctgttgagc aatgtaaaag tgttcctgga atcacctcta cccacatcc catggacct 240
 ccctccgctt tctattcacc ccgcataat ggcctcctta ctgatcacca cgaatccctg 300
 gataatgatg ttgccagaga gatccgctat ctatagtagg tgctagaggc caactgctgt 360
 gattctgctg tggatggaac gtacaatgga acatcctccc cagagcctgg tgcagtgggt 420
 ctgggtggcg gcctaagccc ccctgtctcg ag 452

<210> 1546

<211> 449

<212> DNA

<213> Homo sapiens

<400> 1546
 gaaattcgcg gccgcgtcga ctttgatttt ggtttgacgg cttctggagc ctctcagaga 60
 tggatggggc caaatactgc acccaggtt ccccatcaga atcagcacag acgcacctgc 120
 atctaccatg tagtcttcca cagtatcctc tgggtgggatg ctgggtgggt gccaaatttt 180
 cactaaagcc aacctgcgg agaagcacc tgggtctgtg cctccctgtg ggtatagtcg 240
 gtgtttatcc agaactagaa gatacaatag caagggaaga tacaatagca agcattgctg 300
 aatgctacag tgtaacactc tgaggctttt tgtgaatgaa ttcatttagt ccttgtaaac 360
 ctctgggggt agctcaccat tctgtctcca ttcacagat ggagaatgag gcacagagaa 420
 gttaagtaac ttgccaact tcactcgag 449

<210> 1547

<211> 175

<212> DNA

<213> Homo sapiens

<400> 1547
 gaattcgcgg ccgcgtcgac ctgtggatca tttagctgca gtctcttttc ctacaacctt 60
 gattagatca tataagtctc agaaggcat gccaccacga attctcttta atactgatgt 120
 agcccccttc atcagtgaact ttactgcttt tcagaatgta gtctcggttc tcgag 175

<210> 1548

<211> 211

<212> DNA

<213> Homo sapiens

<400> 1548
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 gttttatgtc aattgtgaaa ggaaaatgtt aggagtatgg tttttaaact tgggcttcat 120
 tttaaaattt ttttttttaa acccagttat ttcacttgat ttgctagctt cagagaagag 180
 atccgaatct gtgccagcg ctgggctcga g 211

<210> 1549

<211> 240

<212> DNA

<213> Homo sapiens

<400> 1549
 gaattcggcc aaagaggcct agtgcaggta ctgttttagg tagagtgtac aaagaaacca 60
 caagtaatcc tgatgggttt acacttaaaag aaaacctgtt gggatgcag agaacaggat 120
 aaaaattata aaataagaga ttggaatatg aagtattttg ccttaatat tttcaatttc 180
 agcctctctc tctctcagtg tctctctctc atgtctttct ctcaagcag ccaactcgag 240

<210> 1550

<211> 210

<212> DNA

<213> Homo sapiens

<400> 1550

gaattcggcc aaagaggcct acgattgaat tctagacctg cctcccgcct cattgcctgc 60
 cctttcccct ctcagtgagc ttctgcaaca ctagagttct ttgtgcaccc tatatacatg 120
 agacactttc ttgccttgag gcctttatgc atggtgtttt tctgttctcg gtatgctttc 180
 etcccttccct tttgtctggc taagctcgag 210

<210> 1551

<211> 244

<212> DNA

<213> Homo sapiens

<400> 1551

gaattcggcc aaagaggcct aagattgaat tctagacctg cctggccttg tatgttttaa 60
 gagttttaca attttatctc ttatgcataa atctgtgac ctttgaagt taatttttgt 120
 tttgttttgt tttgttttgt tggttttttt tttggagatg gagtctcact ctgttcccca 180
 ggctggagta cagtgtacag tggcacgac tcagctgacc acaacctctg ccccccatct 240
 cgag 244

<210> 1552

<211> 254

<212> DNA

<213> Homo sapiens

<400> 1552

gaattcggcc aaagaggcct agggagtggc actaaggac aagtatactg ttaaaagaaa 60
 acaaaaaccc aagcatgagg aaggcgggct ccacgtctat gtgggcttcg tgctgtgggc 120
 tgctgaatga agtcattgga actggagctg tcaggggcca gcagtcagca tttgcaggag 180
 ccaccggtcc attcagattt acaccaaacc ctgagttttc cacctaccca ccagcagcta 240
 cagaagagct cgag 254

<210> 1553

<211> 186

<212> DNA

<213> Homo sapiens

<400> 1553

gaattcggcc aaagaggcct cccgacaaga gcaaaactca gtctcaaaaa aaaaaaaaaa 60
 aaaaaagaaa tagaacatct catccacatg tccatatcca ctaactggat ctttgttttg 120
 ataatectct tccctttctc tgcaggttta ctcccagtat atccatttct acctgagcca 180
 ctcgag 186

<210> 1554

<211> 239

<212> DNA

<213> Homo sapiens

<400> 1554

gaattcggcc aaagaggcct aaacagatgt taaaatatc agtgaaagt ttattggaaa 60
 aaggaattga gatataat tgagatttgg tgaaattgaa ggagaaaatt taagtgaatc 120
 tttaaaatat attctgaatg aaaactgtat tgaggattca tttttgttcc ttttttttct 180
 ttttctcttt tctctttttt cttcttttta atagtctagt tttaggcagc cacctcgag 239

<210> 1555

<211> 249

<212> DNA

<213> Homo sapiens

<400> 1555

gaattcggc cgcgctcgac ccagatgaga ctgtggctgc agccagtgc ttgctggtaa 60
 cttgtgagag atgctgagcc acaggaccta gctaagtggc atccatattt cagatccatg 120

gtaactgtaa gttagtaaac tttgttgttt taagccacta aggtttgggg taatttgta 180
 tgaagcaata aataactcat atgccaacta tgtgccaggc actattcttg gctctgggga 240
 caactcgag 249

<210> 1556
 <211> 210
 <212> DNA
 <213> Homo sapiens

<400> 1556
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 tttttgctag gatagatctt tcacctctta gaaaatcact ctatctgac tttaaatccg 120
 tgagttggaa tgagaaatat tccacttgct aaaattttct tcagcttttt aactttttac 180
 aatctcaaca ggtcaaaggc agatctcgag 210

<210> 1557
 <211> 368
 <212> DNA
 <213> Homo sapiens

<400> 1557
 gaattcggcc aaagaggcct actatatctc atacaattag atttgttctt gcctcaagac 60
 ttcagtctga ttggatgttg atgctgtatt ttgcacatac tcatttgact gtgacagtca 120
 ccattgggtt gcttttgatt ccaaagtctt cacattcaag caataaccga cgagatgata 180
 ttgctacaga agcatatgag gatgagctag acatgggccc atctggatcc tacctgaaca 240
 gcagtatcaa ttcagcctgg agtgagcaca gcttggatcc agaggacatt cgggacgagc 300
 tgaaaaaact ctatgcccaa ctggaaatat ataaaagaaa gaagatgac acaaacaacg 360
 ccctcgag 368

<210> 1558
 <211> 474
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (19)..(23)

<400> 1558
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 tagcacagtg agggccaggg gctttgaact tctcctaga tttcagttct gaagccttca 120
 cttactggct gagagacttg ggcaaattat ttaaccttcc tgtgagtatt ctcatcgata 180
 aaatgggagt actgacagta ctgtatctcc tcagaggatt gttgcaaaga ttagcttcag 240
 taatgtgcac agagtactta ggacaatacg aagtgtgcag taatacattg ccattaaaaa 300
 gagatctcgg gtgtccgcgg gttgccgaat ggagctgagc atcttgatgg aaccagggat 360
 ctcagggtga agactgaagc cctaggctat ggcggaagtt ggggtgcctga agtacaagtg 420
 gaaatatgcc aactgaaccc taaaccgtcg attgaattct agacctgcct cgag 474

<210> 1559
 <211> 128
 <212> DNA
 <213> Homo sapiens

<400> 1559
 gaattcggcc aaagaggcct aattgaatgt taccagaggc tttttctcca cctatggaga 60
 taatcacatt ttttgttctt cattctgttg atttatcatg tttattgttt tgtgtatgtt 120
 ccctcgag 128

<210> 1560
 <211> 250

<212> DNA

<213> Homo sapiens

<400> 1560

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gaattcggcc aaagaggcct agctctctat acagatcttc caaacagaca agcccttcag 60
agccaagatt gcttcaatca ccagcatgtc agaaatagca tcaccagctg cctgggttaa 120
caagtcaata atgttttcaa gcatcttagc agcttttctt ttcttatctt ccagttgttc 180
tgctgattgt tttatcttca ttccaacagc tgtactaaac agtgcagtgc catgccatt 240
tgctctcgag                                     250
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<210> 1561

<211> 229

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (21)..(22)

<400> 1561

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gaattcggcc aaagaggcct nntgcagagg tgctttatat aaattattcc atttaaccct 60
taaattaaac ctacaggtag atattccagt agaatagtta caacaataga gagtaaatta 120
gcatatgtga aaaatggaca tatgctctgg tttttttttt tttttttttt caatagagat 180
gggattttcc tatgttgccc aggatggctc cccaacttct ggctcagag 229
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<210> 1562

<211> 209

<212> DNA

<213> Homo sapiens

<400> 1562

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gaattcggcc aaagaggcct agtcgtggtg caattgaggt ttctgttggt ccaatgggtat 60
ctgttattct ggcttttatt tggtttttcc tagcagctgc ttcactagca gtcacggtt 120
caggaagagc tgaaggaata gaagaattat tgatgttgga gactggacaa tcccttttgg 180
caaattttaa tgcaaaatat gcactcgag 209
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<210> 1563

<211> 278

<212> DNA

<213> Homo sapiens

<400> 1563

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gaattcggcc aaagaggcct actttgaagc atacataata ggtgttggtt tattttttcc 60
tcattggaatc atgggttagt tcattgcagc tcatctcttt ctgtttggtt cgtatagggc 120
tgatagttca ggaccattca gaccccatgt tcagttcata tgctataag tcccactacc 180
tactgaatga atcaaactgt gctgagttga tgaaattacc tatgattcct tcttcgtcag 240
cttccaaaaa gaaatgtgag aaaggttaata atctcgag 278
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<210> 1564

<211> 234

<212> DNA

<213> Homo sapiens

<400> 1564

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gaattcggcc aaagaggcct accctgatgc gtgatgatgg caccaccctc tcagatgata 60
ttcacgagct ttatgtgtac aagtgtgatg agaatagcac gtttaataac catgctctgt 120
acctgggcct gccctgctgc aaagaggact acaatggctg ccctaataatt ccttctagcc 180
tcattctcca gcgcagcacc aaagagtctt tcttcacttc cactacagct cgag 234
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<210> 1565

<211> 294
<212> DNA
<213> Homo sapiens

<400> 1565
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tttcttaggt gagcggaaaa ataagaggc ttaaactctt catccacaaa tacaagcatg 120
aaaacttgga cactttttaa aaaaattttc ttttttatgg cggttgaggt ggaggtttca 180
ctgtgttgcc taggctgccc tcaaattcct gggctcaaag gatccgccta cctcaggctc 240
cctagtagct gggactacag gcacatgcc a cgcacctgg ctctccact cgag 294

<210> 1566
<211> 203
<212> DNA
<213> Homo sapiens

<400> 1566
gaattcggcc aaagaggcct atttaaacag caaactgtgt gcactcaact gttatcacia 60
tggtgtcaag aggtctgtgt cttttaccat ttacacaca attgttcatt acagtatgtt 120
gtcagcctcg tggaaaccag ggggtgtgca tggtaagcag tgggtgtagt gcacctagct 180
tttatattat cacctgcctc gag 203

<210> 1567
<211> 241
<212> DNA
<213> Homo sapiens

<400> 1567
gaattcggcc ccgcgtcgac atgcagcccg ggaaagagct agagacaggg aagaacgatt 60
ggcagcactc acagctgctc aacaagaagc tatggaagag ttacagaaaa aaattcagct 120
caagcatgat gaaagtattc gaagggacat ggaacagatt gaacaaagaa aagaaaaagc 180
tgctgagcta agcagtgggc gacatgcaaa tactgattat gccccaaac tgacctctga 240
g 241

<210> 1568
<211> 366
<212> DNA
<213> Homo sapiens

<400> 1568
gaattcggcc aaagaggcct ccgagatttt ggtgaaaatt aaattagata aacgatgagc 60
agaatgtctg aacacatgtt tggcaatcag aaagttattt ctccaacctc cttccccaa 120
cacacctctc aaaacctttc ttttccattc tatcactcag ttctatctct cctggactac 180
tgcctctcga cagggttttc agccttttgt ctactactcc ttcaaaccat cccaaacctg 240
ctattacaaa caacattcaa aaatcagaaa tttgatcatg gcactccctg tcacaaatcc 300
tcctatgggtg ataacattca gaacaaatct gcattcagag aaagtccacg tgtccctgc 360
ctcgag 366

<210> 1569
<211> 236
<212> DNA
<213> Homo sapiens

<400> 1569
gaattcggcc aaagaggcct acgtcgattg aattctagac ctgcctccag cccataggct 60
aattgatatt cttaacgagg gaaggcaagc acctcatgaa aggttttgtt tgtgttttct 120
ttttctttt tatctctgtt tctagagaca gcaaccttat cagtccagca gatcttaata 180
gactagaaag aagccaggag agtattaagg aactcttaac acaagagaat ctcgag 236

<210> 1570

<211> 184
<212> DNA
<213> Homo sapiens

<400> 1570
gaattcggcc aaagaggcct agcaagattg tttcttgga acagctgtat atgaaatgtt 60
gattctcagg gagacaccta gacacctgaa ttgcagcaga cattttatgg tgttgctaag 120
ttgctggtcc ttctcatcag tagcaggcct actctcactg tcacatatct cccacgggtc 180
cgag 184

<210> 1571
<211> 184
<212> DNA
<213> Homo sapiens

<400> 1571
gaattcggcc aaagaggcct aagatagtcc acaatttatt ccgtgtatcc aagcctgcgt 60
aaacgggaat ttgctaagc aaattgggaa ttggggatta actaaagga attgtgagaa 120
agagaaagaa caacttttaa gaagtatgtt aactgtcata ttttcactta aggggctcct 180
cgag 184

<210> 1572
<211> 238
<212> DNA
<213> Homo sapiens

<400> 1572
gaattcggcc aaagaggcct acgagatgaa tttctatgca ttattggaaa ataaggacaa 60
agtcttccta tttatcatgt tgtggattat tgatggaaga tgctgtggat tggctcagtc 120
aacatccact tcacctcaa acaggtagtc cttcctgcaa agcaaaagga atcccaaac 180
ctcttgagc tatagtggc aaaagcaatt tcagttctgc caaccagag gactcgag 238

<210> 1573
<211> 219
<212> DNA
<213> Homo sapiens

<400> 1573
gaattcggcc aaagaggcct agattgaaag tgatacaatt tgaatattgg tatattgtca 60
ttggtcagta atggaaaaat gagattccac cagtgggtta ctcttttctt gtcttggtt 120
gctatgcctt atccagatc agtgttttgt tccatcccta tggtcatttc taaagccctg 180
acaggagcat cccagactgg agaaatgcag caactcgag 219

<210> 1574
<211> 236
<212> DNA
<213> Homo sapiens

<400> 1574
gaattcggcc aaagaggcct aatttgcatt cccttagagt cttctatttc tgtttttacc 60
aaagcagtc tcatcattga aagcagcaga gctgttttgc tcttaattaa ctaatttaat 120
aaaaaccagg gatttatttc aatcttgaaa taattgcctt ctgtcgaaca gtttaaaatc 180
atacagttag caaaaattta agaataatct aaatgaaaat tagaggggca ctcgag 236

<210> 1575
<211> 199
<212> DNA
<213> Homo sapiens

<400> 1575

gaattcggcc aaagaggcct agtgatctat ccccatctga gcccgacaag ttttgagta 60
 atttattaga cagagataac taatacaaat ttttcagtgg acaatatatt cctgtttttg 120
 gatattgctg tcattggaag actgtgccag aaggtaaatg aagggtgggtg taatgtttca 180
 tattagaaaa atcctcgag 199

<210> 1576

<211> 243

<212> DNA

<213> Homo sapiens

<400> 1576

gaattcggcc aaagaggcct aagagaaaac gaacagagct cctttatata attgaatgca 60
 ttgcagggtta gctgaagtga aatcaagtca agaataattgt ctgaggaaat atcaagttac 120
 tgtaaaggta aatccatcaa gaatatctaa agtcaggagg gaaaaaaaaa gaatttagtg 180
 ttatctatg tatgttactt catgattagt agatccaata tgagaattaa tgtgggtgctc 240
 gag 243

<210> 1577

<211> 252

<212> DNA

<213> Homo sapiens

<400> 1577

gaattcggcc aaagaggcct atgagaaatt aatgatccc tgcagagttc caaaagtgg 60
 gtcaattata tgtgtgcgtt attatttatt ctattatttg ctacaaatca agctcagttg 120
 atcattttcca tgtcattaga agataagtgt atctttctga gggctaaggg tcatgctgag 180
 ctagaagggtt gcaaggctgg agaggaagtg ccttctctcc agcgtcagca aaggctgagg 240
 gcagggtcag ag 252

<210> 1578

<211> 230

<212> DNA

<213> Homo sapiens

<400> 1578

gaattcggcc aaagaggcct agagagattg cttttctctg aatcatttca ttctagactt 60
 tcatcatttc ctgctaagtt gtaatgttac ctgtctcttc cttagtctct agcttatctg 120
 aattttattc tgttattgcc gcacaaatta ttatcaagtt ccactttggg ctgggcgcag 180
 tggctcagg ctatagtcct agcactttgg gaggccgagg cagactcgag 230

<210> 1579

<211> 233

<212> DNA

<213> Homo sapiens

<400> 1579

gaattcggcc aaagaggcct accttttttc ccccatcatt ttgcatctct tgccaaactt 60
 taaccttgca gttctccatc cctcatcaaa tgccatcctc tgggactctc ccattgcctt 120
 gtttgccctga ctcaccatca tgccttagcat cttttgggca ctcagtcctg tttttggcct 180
 ctttacttgg acatcatttt aactgtcact cttcgaaacac cttgaatctc gag 233

<210> 1580

<211> 219

<212> DNA

<213> Homo sapiens

<400> 1580

gaattcggcc aaagaggcct aatttaaagt gctgctttgg attctctgga gcattatgca 60
 ttatagtgt tatccaaaga cttttttgaa aatatgcaga aatttggtgt aattatgtat 120
 ttgtgtcttg tgacaattat gttttataga cctacactag tgccagggtc ctattgtaag 180
 atgttaaaat ctcaagaaaa tttcacagat gcaactcgag 219

<210> 1581
 <211> 199
 <212> DNA
 <213> Homo sapiens

<400> 1581
 gaattcggcc aaagaggcct acgtcgattg aattctagac ctgataacaa aggcttgtct 60
 tattcctgat atcctatcat catctttacc aatttctggc aattatatcc ctgggcctaa 120
 gttcccatTT ttgtatctcg cctcataccc caagtctctc atgaagtggg gtccctgctt 180
 gctctacaca ggactcgag 199

<210> 1582
 <211> 272
 <212> DNA
 <213> Homo sapiens

<400> 1582
 gaattcggcc aaagaggcct aattgaattc tagaccccc gccagcttcc cacacctcat 60
 acgcagccac atctgcccta ttctccatgc ttccagctt gccctgccct cctcatctct 120
 cctgctctgt gcagacctcc acccttcttt cctccacccc tccatccccc aatgcttgta 180
 gaccttccat tcattccgtc tcactgtgag tgggtctctga tcgtccatca cctgaccttc 240
 tccaggactg tcttctcacc ctccccctcg ag 272

<210> 1583
 <211> 408
 <212> DNA
 <213> Homo sapiens

<400> 1583
 gaattcggcc aaagaggcct aggagtggag gttcaggacc aaggggcttc tggctcctca 60
 gccctgttac tcggccatgc cctgcgggtca ctgcggttgc cgccctaat tgtgccaaag 120
 gctgacctgg cctgggctgc gtacaccttc gccctgcttt gccctaaagc ctccgggtct 180
 gcccgcccc tcgccccctgc ctggcaactgc tcaccgcccaggcgacgcc ggctggacca 240
 ggcaactgct gcctttctcc tgccccgacct cggaaccagc tttctctct tacgatgaag 300
 gctgatgccg agagcgggct gtgggcggag ctgggtcagt cccgtattta ttttgctttg 360
 agagagaggg accctaaacc gtcgattgaa ttctagacct gccctcgag 408

<210> 1584
 <211> 266
 <212> DNA
 <213> Homo sapiens

<400> 1584
 gaattcggcc aaagaggcct atgtgaatac tgtaaaagt ctgtatgttt agtagtggtg 60
 tgtgcctggc agtgctgact atgactactg tgccatctgt ctgtgacct gatgtcaggt 120
 acctggccat ggggctacca gcaaggatgt gcaaaggag aaccgctgcc cctgccctca 180
 gcttcccttat gcccgagcca ctacttatcc gtgaatgtga gtgccaaag aaacctaat 240
 tgggtgggaa gccaaagcat ctcgag 266

<210> 1585
 <211> 298
 <212> DNA
 <213> Homo sapiens

<400> 1585
 gaattcggcc aaagaggcct agctgtgctg ccattagaac atttaaatga gtttcattct 60
 gagttttgta ttgttaacct gtgtctggaa actaaacttt ataattgttt acattttagg 120
 tcagaagaca tgtcttcac tacatggcat ctttccctac ctctatgtgc catacgatgg 180
 ttatggacag cagccagaaa gctatctctc tcagatggca ttcagtatcg acagagcact 240
 taatgtggct ttaggcaatc catcttcac tgctcagcat gtgttgatga aactcgag 298

<210> 1586
 <211> 276
 <212> DNA
 <213> Homo sapiens

<400> 1586
 gaattcggcc aaagaggcct agaataccat cgttaacaag atataaatcc ttacatatac 60
 atgcttccca taccttttcc ttccattctg cttacgtaca atacttacct tgaaagttag 120
 cagtgaacac tccagtcac catgcatagt ggaaagcttc aagaaataag aataataata 180
 aaaaagttaa aactataatg ataacttggc cgggcacact ggctcactcc tgtagtcccc 240
 gcgctttggg gggccgaggc gggcgatca ctcgag 276

<210> 1587
 <211> 186
 <212> DNA
 <213> Homo sapiens

<400> 1587
 gaattcggcc aaagaggcct atggtagtgt aagagagaac gtttaattct caattcctct 60
 tgcaggtagg cctcgaactg ggcataata tattctacta tcggcttata gctgtcatct 120
 ttatttatct ggtctccaaa tcccacggtg tcaacaatgg ttaacttcag ccgtacattg 180
 ctcgag 186

<210> 1588
 <211> 427
 <212> DNA
 <213> Homo sapiens

<400> 1588
 gaattcgcca aagaggccta gatcctcaca cctaagccat gttttaggtc cagctacctc 60
 ctccatatca cagcagaagc tgcagtttca acagggtgtg tagcttgccc acaccttggt 120
 gactaagtgg gggcagcagg ttttgaatct ggggtggactg cagctggaac ccacatactt 180
 aatccatacc ctagaatcta ggtaggaaa agaacatgct ttatctgggg ccagggaat 240
 gactgtggga ggcagtgcaa ggaattgagg ccagtgggt gggcaggagg ccaatgatca 300
 cggccccttg ttgcctttgc aatgcagttg ggtacatgtg acagtcattg aagaatgtca 360
 aaggtcaggg atgagattgt atgacatgat cagacctgtg ttttagccag atcactccgg 420
 gctcgag 427

<210> 1589
 <211> 410
 <212> DNA
 <213> Homo sapiens

<400> 1589
 gaattcggcc aaagaggcct agacaacttc agcagtcggt acaagtcaca ttccattttg 60
 attgaatata tgatcttgaa cagctcctgt acttgctctt tgtaaaaaaa aataaaatta 120
 ttttgaatta ttctaccttt gtaaacaatt ggctaaaaga atcatcttta agaaattaag 180
 ccatttacat gtttgtgttt ttctatagca gagcattata ttttgcatca tatgtttcaa 240
 cctagtctaa gtgggtcttt ttacatttt tcaagaacgg atttcctgga atacagcgat 300
 ataatttttg ttgtcaaatt cctaattgca ccatttagtc taaacttagt catttatttg 360
 tgacaataag atgtgttcag gggctccctg tttttaagag actcctcgag 410

<210> 1590
 <211> 318
 <212> DNA
 <213> Homo sapiens

<400> 1590
 gaattcggcc aaagaggcct aggacatgag tgactgaagg aacgaatatt tggagtgggc 60
 aactaacatc aaaagagact ttacatttaa agtgagagat acttttggga gtagaattga 120

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agttctttgc tctcttttgc ttgaaaaggg cagatttctt taggcagtag ttaggaatag 180
catcttgata tgagcaagat gaaacgtggc tgtcaaggga atcctctaaa atgcttttat 240
ctcactatga agctattttt aaaagttaca tgtttattac taattataat tttggttagc 300
aaacaggaac aactcgag                                     318

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<210> 1591

<211> 208

<212> DNA

<213> Homo sapiens

<400> 1591

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gaattcggcc aaagaggcct actctctttt aaataaactc cattcttccc attccatgat 60
gtcctctaag tctgctctcg ctttttctgc tctgttttat tctccctca ctccttgtct 120
cctggcattg ttcactccgc tgtgctccat tgccagaacc gtggaggaaa cccctccccg 180
ctgcagccca cccctctctc tctctcgag                                     208

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<210> 1592

<211> 303

<212> DNA

<213> Homo sapiens

<400> 1592

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gaattcggcc aaagaggcct agacagtcca actagaagag actggtaaga gattgcagtt 60
tgcagaaagc agaggctccac agcttgaagg tgctgacagt aagagctgga aatccattgt 120
ggttacaagg taggaacaga gttttaaact tgtacaaagt ttaatcattt caaatttttg 180
cattgtttta aaagacaaca ctattctgga taacctgggt tcttcctgat gaacagtttg 240
tttggttggt gttttaacat aatacttttt ttctgttgta gtattgttgg agactctctc 300
gag                                     303

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<210> 1593

<211> 189

<212> DNA

<213> Homo sapiens

<400> 1593

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gaattcggcc aaagaggcct actttaatgc ctttggcctt ccattctgat ttctctgatg 60
agaatatgca tggccctgct ttccctggta ggtatttgcc aggcccaatg ctttaacctt 120
aagctgatac tttgctttag atgtcagttc cgttaccagc agccttttga cccaacaacg 180
gcactcgag                                     189

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<210> 1594

<211> 291

<212> DNA

<213> Homo sapiens

<400> 1594

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gaattcggcc aaagaggcct agtaaaaatg aaaatgaaag atacatactt tatgccattc 60
atatttatga atataggaaa gcacttgaac ttttggcctg tctgtggtcc ttcagaattg 120
ggcagtggaa catcctgtgg gaagcactgt catgtgggta cctcagagcc tgccctctct 180
tttcagcctt acctcactgc acagctccag ccaaagggcc acgtgcacca aagggtcaca 240
cctgaccagc ttttaatcat tccatacact gaaatgcctt cactcctcga g 291

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<210> 1595

<211> 416

<212> DNA

<213> Homo sapiens

<400> 1595

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gaattcggcc aaagaggcct atcccggagc aagcgggcaa agctgctcaa aaaggaaatt 60
gcccttctcc gaaacaagct gagccagcag cacagccagc cctgccccac ggggccaggc 120

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ttggaaggct tcgaagagga cggagctgcg ctggggccgg aggcgggcca ggaagtcctt 180
 ccgagggttg agactcttct gcagccaagg aaaaggtcgc ggagcacatg cggagactcc 240
 gaggtggagg aggagtcctc aggaaagcgc ctggacgcag gtctcaccaa cggctttggg 300
 ggtgcgagga gcgagcagga gccgggcggc ggccctgggga ggaaggccac accccgacga 360
 cgctgtgcct ccgagtcag catctcctcc agcaacagcc cgctctgca ctcgag 416

<210> 1596

<211> 297

<212> DNA

<213> Homo sapiens

<400> 1596

gaattcggcc aaagaggcct aaaaagacat ggagaaatca ggtttttttg gtgaaaataa 60
 acatcaatac ccattttgac gtgaatatct aaagtgttat gaaaccaact acatatattt 120
 ttaaaatgct ggggctcata cgtgaagggt gagcactgtg ggcaaatatt gaaagattct 180
 ctacatttaa agattattta agggactggg attatatgca caggataggc taaataatca 240
 gtcacaacag attctggagt gaactgggga gaagtatggg atagtgcaga gctcgag 297

<210> 1597

<211> 217

<212> DNA

<213> Homo sapiens

<400> 1597

gaattcggcc aaagaggcct agttgaactg tgtgttatct gatttctaaa ctctgactg 60
 ttcccacaca tcttgacctc cggttgtgaa tataaacaga gacatttaga tgagcatgtc 120
 taatgggtcat attaaactta gaatttgag actcttgagt ttctttcttt tttctttttt 180
 tttggagaca gagtctcgct ctgtcccaa gctcgag 217

<210> 1598

<211> 403

<212> DNA

<213> Homo sapiens

<400> 1598

gaattcgcgg ccgcgtcgac cataccagaa ttttaggatt ttattttacc ttctaataa 60
 taattagttc taaatgtgtg ttaacccttt tttccccc aa ttaagggtt tgtgttttca 120
 tatcttatct ttttgattg ctcttataat aatgaactct tcctgtatag gtatgaaac 180
 accagaagaa caactggtgt gtgtgccacc acaggaggcc ttctctaacg acccccgggt 240
 aataaataga cagagaagtt ctgattacca gtttccatcc tctccattta cagacacact 300
 aaagggcacc actgaggatg acgtgttgac aggtcagggt gaggagcagt gtgtgccagc 360
 agcagaggca gagccgcctg cagtgcgct aaccacgctc gag 403

<210> 1599

<211> 117

<212> DNA

<213> Homo sapiens

<400> 1599

gaattcgcgg ccgcgtcgac ggtgtagatg atgtttgggg tcaatttctt ctctgcctc 60
 ttcacagtgg gctcactgct agaacagggg gccctactgg agggaaccca actcgag 117

<210> 1600

<211> 103

<212> DNA

<213> Homo sapiens

<400> 1600

gaattcgcgg ccgcgtcgac cgagcactct aggatatcca aaaggctaga gtttgagag 60
 gaaagttaat ctatttatga agtttaggaa aggcactctc gag 103

<210> 1601
 <211> 355
 <212> DNA
 <213> Homo sapiens

<400> 1601
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 gcacagagaa tactagggtc gttgattaaa actcaaggct tcatactgta agggcccaaa 120
 aggaagcatt aaattggggc ataggaagga caagtcacat ccagtttagt gatcaatggt 180
 gggttgaggaa agaaataaca gaattctact cctacatgat agggagagac tacagaggcc 240
 acctagacca acaaactctg ccacaggtc cttgaatcat tgctaccatg tcttggtggt 300
 gggtgtagca ttgctagtga tatgttaact attacctact tatgcaaac tggag 355

<210> 1602
 <211> 613
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> (592)..(601)

<400> 1602
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 tttcagaaaag aactcatacc agtttggtct tatgtctttt ctttaagttct tactgtgatg 180
 atatggttca ttaaaattat tttttttctg atacattcta attaacatga aatcctttat 240
 gtactgcact agcttttaaaa aataataata attttaagag actccaatga acattaatgc 300
 atttttttat ttatgcacag caattatatt ccagaagtga gaatcatgtc aattcccaac 360
 cttecgctaca tgaaggttag taccttgctc attaacagga agaaaaaggg attgatcaat 420
 gatgtgtgta catgtgtatg tgggtggcag tgtgtgtatt tggcacagga tccagtgagc 480
 aagggataga aaagaagaca gtttgggata ataaagacta aatttggtga cactgagatt 540
 cttgacaaca gcactctgatg aaaagtaggg agaaggagca ggggtgcacat tnnnnnnnnn 600
 ntgagtactc gag 613

<210> 1603
 <211> 337
 <212> DNA
 <213> Homo sapiens

<400> 1603
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 ttgggagaag agaggtccca gtggggactg gtacgtgtca gcctgtccac actgcttcct 120
 cagggtgggta cagtaattgt gaggcagctg cgtcacaggg tagatactga actggcagag 180
 agcaccttca aactggactg catgcgggtt catcttccca aagaggaagg agccccagg 240
 gtcgagtga gggccccctg tggaaaggca gcaggacagg caccggcgcc tgcccgagc 300
 cagtcaccag agtgactgtg cggcatcgga gctcgag 337

<210> 1604
 <211> 458
 <212> DNA
 <213> Homo sapiens

<400> 1604
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 cattctctgt cctggcgctc agcacccgtg cccaggccga accggtgcag ttcaaggact 120
 gcggttctgt ggatggagtt ataaaggaa tgaatgtgag cccatgcccc acccaaccct 180
 gccagctgag caaaggacag tcttacagcg tcaatgtcac cttcaccagc aatattcagt 240
 ctaaaagcag caaggccgtg gtgcatggca tcttgatggg cgtcccgatt ccctttccca 300
 ttcctgagcc tgatggttgt aagagtggaa ttaactgccc tatccaaaaa gacaagacct 360

atagctacct gaataaacta ccagtgaaaa gcgaatatcc ctctataaaa ctggtggtgg 420
 agtggcaact tcaggatgac aaaaaccata gtctcgag 458

<210> 1605
 <211> 416
 <212> DNA
 <213> Homo sapiens

<400> 1605
 gaattcgcgg ccgcgtcgac cttaaaagtt atagatttgc aaatttcaaa gaaagccgtc 60
 ttatttaatt gatataattga aatttataac tcacctttca gtggaatagt ttttgtaaat 120
 tcatgagaaa gaaacaaaat atcaatttat agtagttgat ggtgttataa atccagaaga 180
 agctctataa cattataaaa atcaagattg gttgctcaca ttttagagta ccaaaggcag 240
 caaaatgatg taatttataa ataataaatc ttaaaactgtt gataaaccac actctgaagt 300
 atttttaaag aggtttattc taagccaatg agtgaccata gcccaaggag cagtctcaag 360
 aggtcctgag aaagtgtgca ctgggtgttg gaggtaacatt ttagggagta ctcgag 416

<210> 1606
 <211> 242
 <212> DNA
 <213> Homo sapiens

<400> 1606
 gaattcgcgg ccgcgtcgac cctaaaccgt tgattgaatt ctgacctgc ctcgagtcca 60
 ggatattgac ttctgaattc ttaagttttc ttcttcccag ctctatgagg ccactaatag 120
 ctctatcaat gttattggcc ctcatcccag gcaacactca gcttctcagc tttttgcctt 180
 cccagaatca gcaatacat tcagctaaga aaaaaaaaaat agctgcagca catcagctcg 240
 ag 242

<210> 1607
 <211> 297
 <212> DNA
 <213> Homo sapiens

<400> 1607
 gaattcgcgg ccgcgtcgac aatcaggaat ttgaagaaaa tggaaatgtt tacatttttg 60
 ttgacgtgta tttttctacc cctoctaaga gggcacagtc tcttcacctg tgaaccaatt 120
 actgttccca gatgtgtgaa aatggcctac aacatgacgt ttttccctaa tctgatgggt 180
 cattatgacc agagtattgc cgcggtggaa atggagcatt ttcttctctc cgcaaatctg 240
 gaatgttcac caaacattga aacttttctc tgcaaaagcat ttgtaccaac actcgag 297

<210> 1608
 <211> 366
 <212> DNA
 <213> Homo sapiens

<400> 1608
 gaattcgcgg ccgcgtcgac cattgacttc ttctaccggc cgcataccat caccctgctc 60
 agcttcacca tcgtcagcct catgtacttc gcctttacca gggatgactc tgttcagaa 120
 gacaacatct ggagaggcat cctctctgtt attttcttct ttcttatcat cagtgtgtta 180
 gctttcccca atgggtccgtt cactcgacct catccagcct tatggcgaat ggtttttgga 240
 ctcatgtgac tctacttctt gttcctggta ttctactctt tctgaattt cgagcagggt 300
 aaatctctaa tgtattggct agatccaaat cttcgatacg ccacaaggga agcagaagtc 360
 ctcgag 366

<210> 1609
 <211> 120
 <212> DNA
 <213> Homo sapiens

<400> 1609

gaattcgcg cgcgctcgac gtgcattata gtgatttcag tagattcaca ctcaaattctt 60
 ttcagtgtca tacattttatt aagccataaa gttatgaaac cctcagctct tgtactcgag 120

<210> 1610

<211> 209

<212> DNA

<213> Homo sapiens

<400> 1610

gaattcgcg cgcgctcgac tgacaccttt ccccaaatat agattacaat aaagaaggct 60
 actaaatgca tctgaaaagg tggatcctga ctactgttag gctagactcc ctaagctccc 120
 actatgccca gctaatttgt ttttgtattt ttagtagaga cagggtttca ccatgttggc 180
 caggctggcc tcgaactcct gacctcgag 209

<210> 1611

<211> 230

<212> DNA

<213> Homo sapiens

<400> 1611

gaattcgcg cgcgctcgac attctagacc tgectcgagt ctaccagga ctgcttggtc 60
 tttcttaaaa ccttaagcta actgtaggtc atcattcaca tgccaaaaat ccagccatgg 120
 cttctctttc aaaattaaca gtgaatatct tatccctagg cccattccta ctctccagcc 180
 ttaaccttct tcccttctgc cactgctatc aagaaccgag cccactcgag 230

<210> 1612

<211> 387

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> (380)

<400> 1612

gaattcgcg cgcgctcgac tgggccttta gaagacttgg cttcttcact ggagagcttt 60
 tattcaggag gctgctagca ccagtctctc ctgcggcctt gccaaagagga gagtgtgtaa 120
 aggggtgcac ctctgtgctc gggctgactt caccgtcacc tggtttcttc tccttcaggg 180
 aaaagggttt cttattgggg cttattttct tcctgtgcca aaagatagcc atgtctttat 240
 gcaaaccttt ccccttcttt ctagccaggg ctgcagatgc atgatcaaag aaatgtacca 300
 ctgcaagctt tttgtctgct ctggtaaaga tgcgtgcac tttagcaatt ttgccaaaaa 360
 ggttctccag aatggaacgn tctcgag 387

<210> 1613

<211> 273

<212> DNA

<213> Homo sapiens

<400> 1613

gaattcgcg cgcgctcgac gtaggaattc caggttcagg ttccagcaca gccaatattat 60
 tcacaggatt gttgtgtgaa ctgaatgaaa cacacacata tgaaaacaag gtatcttgat 120
 aatcagtaa cttttataac accgttgtgc caaaaaaag ccttacttta ttactttatg 180
 tgcattgtct cattaatata ttctagtgtc tgtgattgtc aggtcagcac tgtcagccac 240
 ttcaaagaag aagagaatag gggagatctc gag 273

<210> 1614

<211> 345

<212> DNA

<213> Homo sapiens

<400> 1614
 gaattcgcgg ccgcgtcgac gttcttagta ttaagaggc cttcataatc acagaagaga 60
 gtgatattat aggattagaa cattgtatctt ttgggttttg gtgctgaagt tctaattctta 120
 cctctgaagt gatcctgata ttttgccaaa gttgtgactt taatattctg tggcttgtaa 180
 ttgtgatttt tctaatacca gagtagaatt ctggggagga atttttctaa acccaaatac 240
 ctcaatttga agtgaggcct ggctttaaat aataacacat ttgagtttga gcttttcctg 300
 caattaagtg gtatgctgca aaaaggaatt cgggttagcgc tcgag 345

<210> 1615
 <211> 288
 <212> DNA
 <213> Homo sapiens

<400> 1615
 gaattcgcgg ccgcgtcgac cgattgaatg ggggttttgt ggggttctttt tgttgatatt 60
 attgttggtt tctgtttgtt tgtttgtttg tttgtttgtt tgttttttat ggtcaggcca 120
 cttgtctata gtccctgctg ggtttgcgtg ggtctgcttc agaccctagt tgcctcagtt 180
 tttcccatat ctgaagggtat caccagtgaa agctgcaaaa catcaaagat ggcagcctgc 240
 ttcttctctt gcttcttctt cgccgcagct catgcctgta atctcgag 288

<210> 1616
 <211> 163
 <212> DNA
 <213> Homo sapiens

<400> 1616
 gaattcgcgg ccgcgtcgac gtgttcccga cacaagaaa tgataaatgc ttcagggtgat 60
 agatatgcta attatcctcc ttttatcatt acactttata caaatgtatc aaagtctcac 120
 actggctggg ccggttgact cacacctgca gtccgaactc gag 163

<210> 1617
 <211> 292
 <212> DNA
 <213> Homo sapiens

<400> 1617
 gaattcgcgg ccgcgtcgac attttaaaac agctgtccat actttcttga acctaagcat 60
 acaattgaac tgtttccact gcaccgctcc taacatttct ttttgtctca tttctctttg 120
 tggctaatta ttaagataat ataaacttgc attaataaat ttaatgagaa agtgtttagg 180
 ctatgtgtgg cagctcacat ctgtaacccc aacactttgg gaggtgagg caggagaatc 240
 tcttgagccc aggatttcca gatcagcctg ggcactactg caagacctcg ag 292

<210> 1618
 <211> 368
 <212> DNA
 <213> Homo sapiens

<400> 1618
 gaattcgcgg ccgcgtcgac cacacagtgt taccggatga ggagtctggt cttgctttgc 60
 tttctctgcc ttttctgtct tgtcattggc tctcccgccc tcttacacgc accccgctg 120
 ttgcttctct tattctccag ttccttcca atcccccttc acttctcttt actccctcc 180
 cccagggtcag tgcctggcgt ttcctccctc tttctgttct cccatccctc cgggcagctg 240
 tctctgtcgt gttctgtctc ctgctctccc gccctctac acgcaccgc ctgttgcttc 300
 tctcattctc cagttccctt ccaatccccc ttcacttctc tttactcccc cccccaggt 360
 cgctcgag 368

<210> 1619
 <211> 108
 <212> DNA
 <213> Homo sapiens

<400> 1619
 gaattcgcgg ccgcgtcgac ggtgggtcaa tcatcagttt aggctgccat aactaatatc 60
 atagacggtg gcttaagcaa cagaatgtat ttctcacac tactcgag 108

<210> 1620
 <211> 287
 <212> DNA
 <213> Homo sapiens

<400> 1620
 gaattcgcgg ccgcgtcgac caagaagtcc aggaacaagt ctcccaaaaa aactgaaatt 60
 gtactgctct aatgttaaag tcaccttttg catttctctg gctaggagtg aggggaactg 120
 ggaagaatga attctcgaca cacctttctt tgggtttttt ttgggtttt gcagtgcctg 180
 catctacctc cagcccgctc ccagggggcca attacagtc cactccctac accccctcac 240
 ctgtcccccac ctacactcca tcccagcac cagcctatac cctcgag 287

<210> 1621
 <211> 129
 <212> DNA
 <213> Homo sapiens

<400> 1621
 gaattcgcgg ccgcgtcgac ggggtccccc ttccccagtc ttaacaacaa aaaacaaaaa 60
 accagcctgg agatctacat tgtgatgctt ttaataact tgactcctt cttggccagc 120
 tgtctcgag 129

<210> 1622
 <211> 336
 <212> DNA
 <213> Homo sapiens

<400> 1622
 gaattcgcgg ccgcgtcgac taaaatcaga acgtcagctc ccggtttgtt aatgggcagg 60
 tgttttccaa aatttggttg taaagctttt gtttgatat tcaaatttat tccccctga 120
 aacaaatata tctacttagt aaatatctgt ggaattatct ttaagctat gagtagcaaa 180
 aaaggtggcc tttgtgtcac ccacttaccc ctctcttta gctcctgggg cagacatctg 240
 gaattcttcc tagcactctt cctgctgata ccagatacaa ctgcagtagt tcataacatg 300
 accctgcagg tgcccacaac caaggcatta ctcgag 336

<210> 1623
 <211> 301
 <212> DNA
 <213> Homo sapiens

<400> 1623
 gaattcgcgg ccgcgtcgac ggattaccag cacctcaggc cacaagcat ccatcagcgg 60
 ggcgctcctaa ctgtggacca cctctgctgg cgtgtgggca gtgactcca cattcagcgg 120
 gcgccacacc caccatata gcatgttttg ggtgaggcac ttgttctgga ctcttcaca 180
 ctacagggta gctataacca gcctctgggc ctgtccagca cccagtcaga tacccttttt 240
 cttgattgta ccattcgagg acttcagggt gaagcatcag atacctgtgc ccacactcga 300
 g 301

<210> 1624
 <211> 202
 <212> DNA
 <213> Homo sapiens

<400> 1624
 gaattcgcgg ccgcgtcgac tggagatgag tccttggttc caattcatgc tgtttatcct 60
 gcagctggac attgccttca agctaaacaa ccaaatacaga gaaaatgcag aagtctccat 120